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THE UNIVERSITY OF ALBERTA

THE EFFECTIVENESS OF THE LEARNING
ASSISTANCE FIELD SERVICE
PROJECT

by



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A THESIS

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ABSTRACT

This study was an endeavor to learn whether a project designed to assist learning disabled children was effective. The project was the Learning Assistance Field Service Project which commenced operating in Alberta in 1973.

The results of an investigation reported by Lawrence and Lorsch suggested the proposition that the effective organization was the one which was sufficiently differentiated to meet the demands made by the environment in which it operated and yet which possessed a high state of integration.

To investigate the environment in which the Project operated an interview schedule was developed. The schedule was based partly on the Lawrence and Lorsch instrument and partly on other environmental descriptors. The instrument used by Lawrence and Lorsch to study the state of differentiation existing within an organization was adapted for use with the Project. The instrument used to measure the states of integration existing between the Project and each of the three major segments of its environment was based upon conflict and conflict resolution.

Effectiveness was defined as the attainment of objectives. A number of objectives prescribed for the Project by the Central Alberta Regional School Board were included in questionnaires. These questionnaires were administered to the Project staff, a sample of principals of schools participating in the Project and a sample of

teachers drawn from those teachers who had received assistance through the Project. The responses made by each group were used to assist in the making of a judgement as to whether the Project was effective.

The relationships among environmental diversity, differentiation integration and effectiveness were investigated. Three hypotheses relating to the effectiveness of the Project in each of the three major environmental segments were found to be tenable and thereby support the proposition suggested by the Lawrence and Lorsch study.

One of the goals prescribed for the Project was to bring about in teachers a more favorable attitude toward learning disabled children. An instrument which was devised to measure attitude was administered to teachers associated with the Project and to a control group of teachers at the beginning and the end of the school year. The attitudes held by both groups toward eight concepts related to learning disabled children were found to remain constant between the two applications of the instrument.

The instruments which were developed to assist in the determination of whether the Project was effective were found to be suitable for this purpose. The Project staff, principals of schools associated with the Project and teachers who had received assistance through the Project agreed that the Project was attaining prescribed objectives and was providing assistance for learning disabled children and their teachers. Although no change in the attitudes held by teachers toward learning disabled children was detected, all other objectives were being achieved to a degree sufficient to allow the conclusion to be drawn that the Project was effective.

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Chapter 1

INTRODUCTION

Most educational systems which offer programs for children in grades 1 to 12 in Alberta contain children who have some form of learning disability. Because resources are often limited, these particular children cannot always be given the specialized assistance which might enable them to learn at the same rate as other children who are of a similar age.

Provision is usually made for handicapped children, such as those who are blind, deaf or severely retarded, but the fact that there are many other children who suffer from some disability which prevents them from learning, and that these children also require educational assistance, is becoming more widely recognized. For example, the Report of the Commission on Educational Planning (1972:78) notes that:

Many studies have drawn attention to the inadequacies of the present level of service to the handicapped children and youth of Alberta. This backlog of deficiencies, when added to a conservative prediction of a 10 percent future incidence of some form of serious mental or emotional impairment, illuminates the magnitude of the problem: about 50,000 learners a year requiring special treatment, schooling and care.

The range of different disorders, the variance in their severity, the number affected and their geographical distribution, and the availability of resources defy simple and immediate solutions.

The services which the larger school jurisdictions within Alberta are able to offer at present to meet the needs of learners requiring special treatment may be extended to serve some of the anticipated increased number of children requiring assistance. Larger jurisdictions also have greater resources on which to draw to pay for additional

facilities. Lack of revenue sources in the small jurisdictions may restrict the ability of these jurisdictions to hire teachers with expertise in special education or to supply the extra materials which may be necessary if they are going to broaden the range of services they offer.

Before 1972, school jurisdictions within Alberta had been relieved of part of the burden of making provision for children believed to be suffering from some form of learning disability as the Alberta Guidance Clinic of the Department of Health and Social Development had offered child assessment services to all schools. The procedure which operated when a school required an assessment to be made of a child was for the school superintendent to submit a written request to the Alberta Guidance Clinic. A request for an assessment was made only after the superintendent or the principal of the school had gained permission for testing to be conducted from the parents of the child for whom the assessment was sought. On receiving the request, the Clinic would arrange to interview the child, accompanied by a parent. When the testing had been concluded, an assessment report would be sent to the superintendent. The superintendent would then forward the report to the school.

Depending on the nature of the difficulties which the child was experiencing, the report might contain the name of a specialist to whom the child could be referred--a speech therapist, for example. In cases where the Alberta Guidance Clinic thought that the problem was more severe, the name of a special school might be given. Apart from recommendations of this nature, once a report of the assessment had been forwarded to the superintendent the Clinic played no further role in the treatment of the child. The task of providing a remedial program for the child

was left to the superintendent, the principal and the teacher of the child. If the school had a remedial education specialist on staff he would be included in the planning of the remedial program.

The task of providing for assessments of children became difficult for school jurisdictions in 1972 when the Alberta Guidance Clinic ceased conducting a testing service for schools. Schools were faced with the problem of finding some other agency or means which could identify children with learning disabilities and assist teachers.

The Report of the Commission on Educational Planning (1972:78) suggests that one solution to the problem might be by:

. . . increasing the number of travelling clinics and rehabilitation teams to provide diagnostic and treatment services throughout rural Alberta for those suffering from primary learning, behavioral, social, sensory, speech and physical disorders, and extending the availability of learning materials geared to the unique requirements of the exceptional child.

An alternative to an external travelling clinic and rehabilitation team would be for a school district to organize its own rehabilitation team. Cost would be the major consideration. The larger jurisdictions may experience difficulty in financing such clinics but the small jurisdictions would be unable to establish a travelling clinic without imposing a high tax rate on inhabitants within the jurisdiction. A more equitable form of providing equal opportunity in education would probably result if an external form of financing assistance for pupils with learning disabilities could be found.

In order to avail themselves of an offer by the provincial government to provide finance for a scheme to assist learning disabled children, a group of school jurisdictions of varying size in central Alberta were obliged to band together to form a Regional School District. The school jurisdictions formed the Central Alberta Regional School District Number

Three. They organized a rehabilitation team and implemented a scheme which was called the Learning Assistance Field Service Project.

PURPOSE OF THE STUDY

The purpose of the study was to determine whether an organizational form and method of operation of a scheme designed to assist disabled learners and the teachers of learning disabled children was effective. Specifically, the study was conducted to learn whether the Learning Assistance Field Service Project was proving suitable in the opinion of the Learning Assistance Field Service Project staff and of school personnel.¹

Another purpose of the study was to develop a set of instruments which would provide data on which judgments could be made about the effectiveness of the Project and which would enable the Project to be studied in detail. An in-depth study was believed to be necessary so that as many factors as possible which could affect the outcome of the Project could be considered.

THE LEARNING ASSISTANCE FIELD SERVICE PROJECT

Before the objectives of the study are considered in greater detail, information relating to the establishing of the Project is presented below. The topics discussed are: the establishing of the Central Alberta Regional School District Number Three; the functions of the Board; the operation of the Project; and the goals of the Project.

¹The Learning Assistance Field Service Project will be referred to frequently as the Project.

Central Alberta Regional School
District Number Three

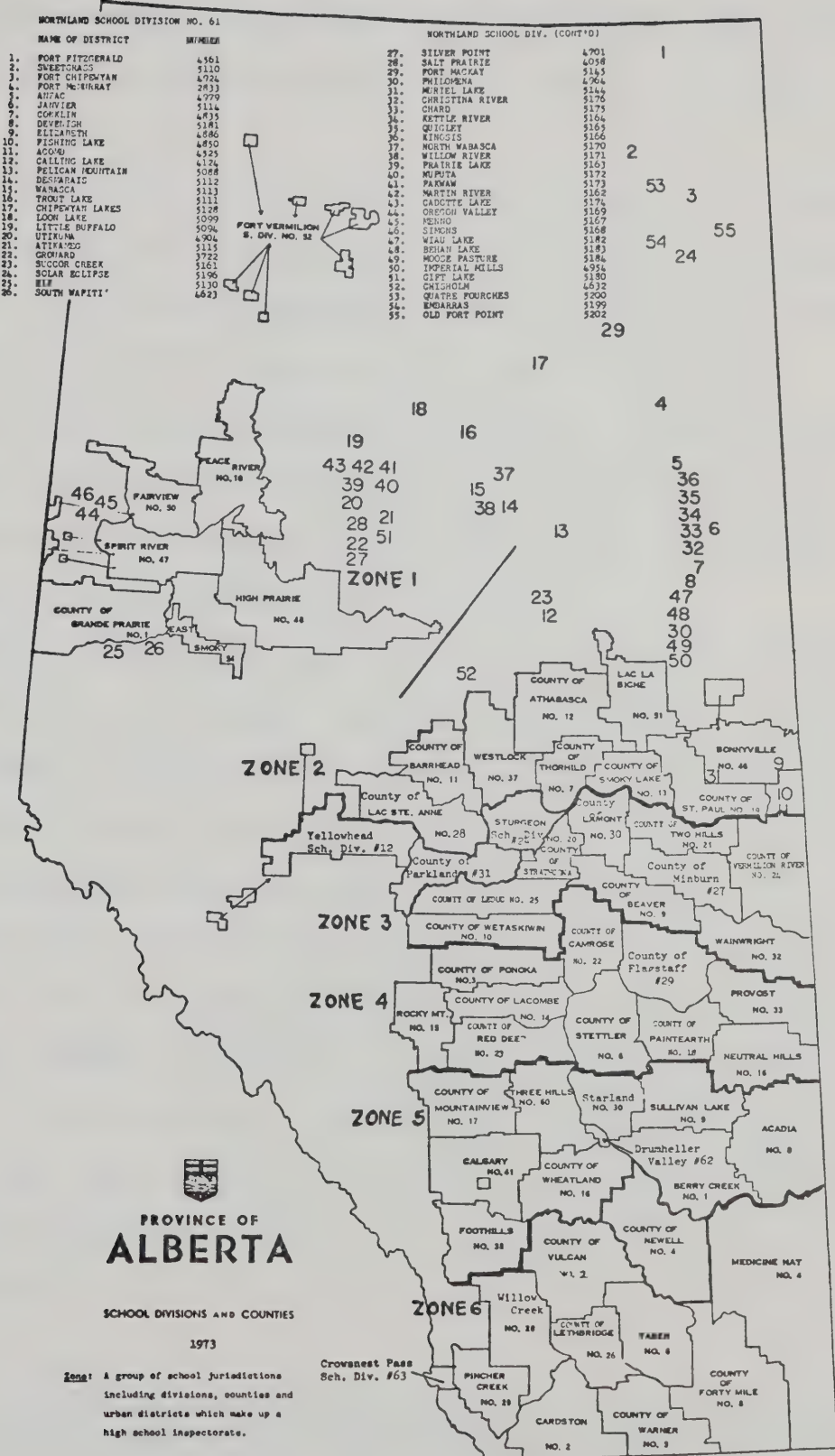
Concern about the special education facilities available for the disabled learner in central Alberta led Mr. H.C. Rhodes, Education Consultant in Evaluation from the Red Deer Regional Office of Education, to prepare "A Cooperative Plan for Special Education Services" which was presented to a December, 1970, meeting of the Zone 4 Superintendents' Association.²

The plan contained data which indicated that teachers in the smaller jurisdictions were not receiving the same amount of assistance from special education consultants as teachers in the larger jurisdictions. Mr. Rhodes had found that in 1969-70 the ratio of consultants to teachers in Zone 4 was 1:47. The two largest systems in the Zone had 35 consultants assisting 988 teachers but all other systems in the Zone had 3.5 consultants assisting the 819 teachers in these systems. The three smallest systems in the Zone had no consultants at all.

The inequality in the amount of consultant service available to teachers in the smaller jurisdictions in Zone 4 was of prime concern to Mr. Rhodes. His plan suggested that a more equitable distribution of consultant services to teachers in the Zone could be achieved by pooling "the resources of all participating school districts which cannot adequately meet the needs of handicapped children" (A Cooperative Plan for Special Education Services, 1970:2).

The plan proposed that the implementation of a program of assistance for the learning disabled and their teachers could be

² Zones within Alberta are shown in Figure 1.



administered through a Central Board. Each participating system would nominate one representative who would become a member of the Central Board.

In June, 1971, the Zone 4 Superintendents' Association conducted a survey which indicated that teachers in the Zone believed that about one child in every five or approximately 5,000 children in their charge in grades 1 to 9 suffered from some form of learning disability.

Various proposals for assisting the learning disabled children in the Zone were discussed at the September 30, 1971, meeting of the Zone 4 Superintendents' Association, but budget limitations prevented the formation of a cooperative scheme at that time.

When the Progressive Conservative Party came to power in the 1971 provincial election in Alberta, it pledged to support special education. The Department of Education at the request of the Minister of Education asked Regional Offices of Education to forward any proposals they might have for developing special education. One of the proposals received by the Department of Education was the plan prepared by the Education Consultant in Evaluation from the Red Deer Regional Office of Education.

The Department of Education included the plan, and a similar plan from the regional office in Grande Prairie, as "B" budget items when the budget was submitted to the Cabinet in the spring of 1972.³ The Cabinet approved both plans and provided \$150,000 each year for two years for each plan.

³ The Department of Education submits an "A" budget and a "B" budget to Cabinet. The "A" budget is the cost of all aspects required to maintain the existing program. The "B" budget gives the cost of each desired innovation.

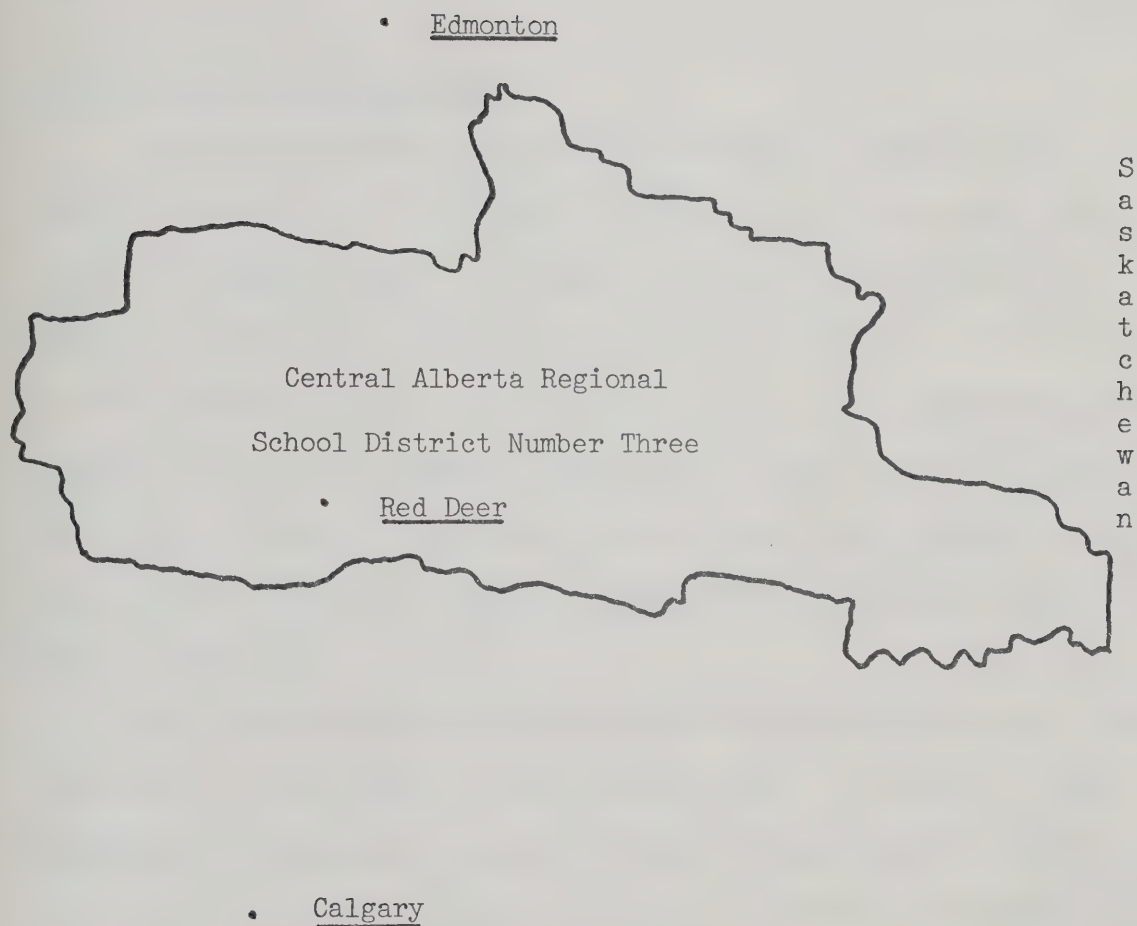
With the knowledge that financial support for a project designed to assist the learning disabled was assured, a special meeting of representatives from school systems in Zone 4 was convened on September 1, 1972, to discuss further the cooperative scheme or "Learning Assistance Field Service Project" as it then became known. The representatives were advised that finance from the Department of Education was dependent on the participating systems forming a Regional School District.

Within The (Alberta) School Act provision exists for two or more boards to establish a Regional School District if:

- a. the regional district will be able to provide educational services not available in each district or division, and
 - b. the regional district can serve (i) a larger area than is contained within the external boundaries of each constituent jurisdiction, or (ii) an area that is approved by the Minister.
- (Section 24)

A meeting with the aim of forming a Regional School District in central Alberta was held on October 3, 1972. The result of this meeting was that the Central Alberta Regional School District Number Three was established. The area of Alberta which is encompassed by this district is shown in Figure 2. The district is, in fact, Zone 4.

The jurisdictions which signified their intention of joining the Regional School District were: Camrose Roman Catholic Separate School Division Number 60; Flagstaff County Number 29; Lacombe County Number 14; Neutral Hills School Division Number 16; Paintearth County Number 18; Ponoka County Number 3; Red Deer County Number 23; Red Deer City Public School Division Number 104; Red Deer Roman Catholic Separate School Division Number 17; Rocky Mountain School Division Number 15; Stettler County Number 6; Stettler School District Number 1475; Theresetta Roman Catholic Separate School Division Number 23. Later, Camrose City Public School Division Number 1315; Camrose County Number 22; Killam Roman



Source: "Some Facts and Figures". Central Alberta Regional School District, Red Deer, circa 1972. (Mimeographed.)

Figure 2

Central Alberta Regional School District Number Three

Catholic Separate School Division Number 49; Nordegg School Division Number 3211; Ponoka Roman Catholic Separate School Division Number 95; and Provost Roman Catholic Separate School Division Number 65 were to join.⁴

Regional School Board Structure

Each participating jurisdiction nominated a member to the Regional School Board.⁵ The Board elected its own Chairman and Vice-Chairman and appointed Mr. H.C. Rhodes, the Education Consultant in Evaluation from the Red Deer Regional Office of Education, as Director for the Learning Assistance Field Service Project. An understanding of the Board was that the Project Director was to spend only fifty percent of his time on Project activities; he was to spend the remainder of his time on duties associated with his position with the Red Deer Regional Office of Education.

The Director was authorized to make recommendations to the Board concerning the appointment of the following staff: 4 itinerant field consultants in education; 1 speech and hearing pathologist; 1 school psychologist; 1 reading diagnostician; and 1 mathematics consultant (half-time). The reading diagnostician and one of the field consultants joined the staff on January 1, 1973; the school psychologist joined on May 1, 1973; and the remainder commenced duties on September 1, 1973.

In October, 1973, additional support was obtained for the Project

⁴ Shortly after the Project commenced, Nordegg ceased to be a separate Division and became part of the Rocky Mountain School Division.

⁵ Hereinafter referred to as the Board.

from the province under the Priority Employment Program. The Priority Employment Program was a measure undertaken by the provincial government to reduce seasonal unemployment during the winter months. Unemployed people who undertook retraining programs were paid a wage by the government while being retrained. The Project Director suggested to the government that unemployed teachers could be trained by the Project staff to administer the special tests which were used in the Project. The government approved this suggestion and gave the Board permission to bring on staff until March 31, 1974, six unemployed teachers. These teachers acted as aides to the consultants.

The structure of the organization was such that Project staff members were responsible to the Project Director who was responsible to the Board. The Board contained a member from each participating school system but the Board was responsible only to the Minister of Education. The structure of the organization is presented in diagrammatic form in Figure 3.

Functions of the Board

The School Act (1970:10) states that:

- (2) The agreement (entered into by two or more boards which establish a regional district) shall
 - (a) determine the number of members of the board of the regional district, the number to be named by each participating board, the manner of their appointment and terms of office, and
 - (b) the manner in which the costs of establishing and operating the regional district are to be borne by each participating board
- (4) Subject to the agreement referred to in subsection (2), the board of a regional district has all the powers, functions and duties of a board of a division and this Act applies to a regional district as it does to a division (Section 24).

Under The School Act, the Board was empowered to operate, save for subsection (2), in the same way as any other school board in Alberta.

Minister of Education



Regional School Board



Project Director (Half-time)



Field Consul- tant	Field Consul- tant	Field Consul- tant	Field Consul- tant	Math Consul- tant	Reading Diagnos- tician	School Psychol- ogist	Speech and Hearing Pathologist
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Figure 3

Organizational Structure of the Learning Assistance
Field Service Project

This meant that the Board would be called to account for the \$300,000 allocated to the Project and for any other moneys which might be obtained.

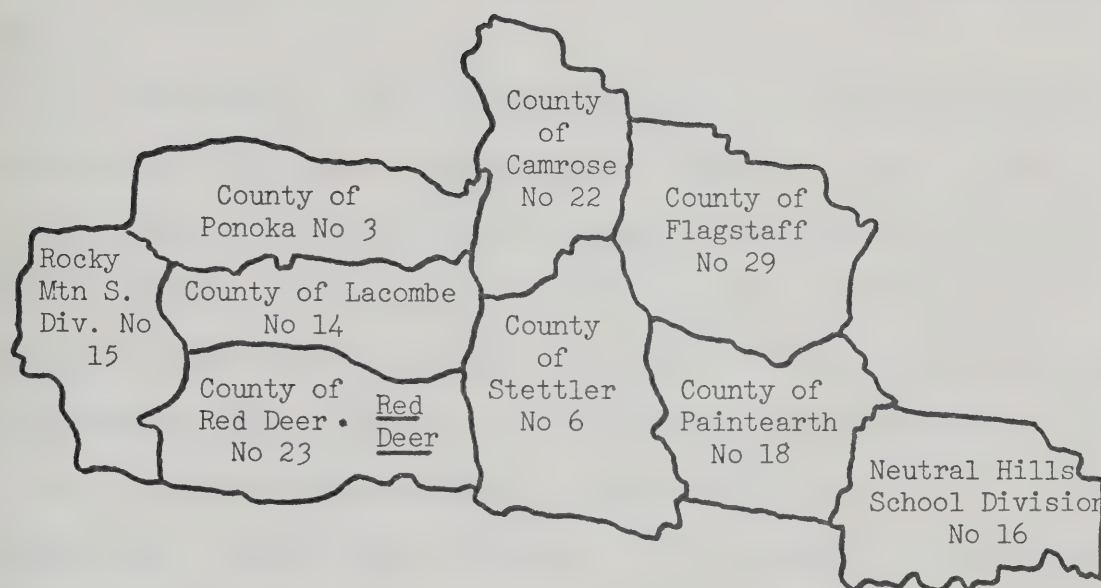
Project Operation

The Project Director was authorized by the Board to administer the Project. The Project had a central office in Red Deer and was administered from this point.

The four field consultants were based at Camrose (serving Camrose County Number 22, Camrose Roman Catholic Separate School Division Number 60, Camrose City Public School Division Number 1315, Flagstaff County Number 29, and Red Deer City Public School Division Number 104); Lacombe (serving Lacombe County Number 14, Ponoka County Number 3 and Red Deer Roman Catholic Separate School Division Number 17); Rocky Mountain House (serving Nordegg School Division Number 3211, Red Deer County Number 23, Red Deer City Public School Division Number 104 and Rocky Mountain School Division Number 15); and Stettler (serving Neutral Hills School Division Number 16, Paintearth County Number 18, Red Deer City Public School Division Number 104, Stettler County Number 6, Stettler School District Number 1475 and Theresetta Roman Catholic Separate School Division Number 23). These areas are depicted on the map given as Figure 4.

The school psychologist, curriculum and materials specialist, mathematics consultant, reading diagnostician, and speech and hearing pathologist were based in Red Deer but were to be available to all participating systems. The reading diagnostician also acted as a consultant for Killam Roman Catholic Separate School Division Number 49, Ponoka Roman Catholic Separate School Division Number 95 and Provost

• Edmonton



• Calgary

Source: "Some Facts and Figures". Central Alberta Regional School District, Red Deer, circa 1972. (Mimeographed.)

Figure 4

Location of School Systems Participating in
the Learning Assistance Field Service Project

Roman Catholic Separate School Division Number 65. The system of operation was for the field consultant to spend three days each week in his district, one day in schools in Red Deer and one day at the Learning Assistance Field Service office in Red Deer where he would prepare materials, consult with other specialists and attend to administrative matters.

The number of service days to which each participating system was entitled was determined by taking the number of pupils in grades 1 to 9 in all participating systems. From the total number of consultant days available, days were allocated to each system according to the percentage entitlement that had been calculated. For example, if system A had 5,000 pupils in grades 1 to 9 and there were 50,000 pupils in grades 1 to 9 in all participating systems, system A would be allocated 10 per cent of the consultant days available. If the number of days available was 1,000, system A would be allocated 100 days.

The Agreement signed by the member systems of the Central Alberta Regional School District Number Three indicates that the Learning Assistance Field Service Project intended:

- a. To supplement, but not replace, the measures and personnel being presently used in any particular jurisdiction in work with learning-disabled children
- c. To provide services and advise participating personnel in such activities as:
 - i. Diagnosis, prescription, consultation and follow-up problems of individual children.
 - i.i. Communication and articulation with Health and Social Development Agencies, School for the Deaf, and other agencies providing special social services.
 - i.i.i. Support to schools and teachers enrolling learning disabled children in special class and regular class.
 - i.v. Providing effective school liaison with outside agencies and professional personnel. ("Some Facts and Figures," circa 1972:4)

This policy, formulated by the Board, served as a broad guide

to the intentions of the Project for participating systems and for the Learning Assistance Project staff.

Role descriptions prepared by the Project Director indicate that field consultants were given the responsibility of disseminating to schools and teachers in their areas information about the policies and goals of the Board.⁶ Field consultants were to act as a link between schools and other Project staff and to arrange consultations with the mathematics consultant, reading diagnostician, school psychologist and the speech and hearing pathologist as required. The field consultants were to assist teachers in the diagnosing of scholastic and behavioral problems in children and to assist teachers in the preparation of programs for these children.

Each of the other specialists had a role description which included the assisting of teachers in the diagnosing of learning disabilities in children and assisting teachers in the planning of remedial programs.

⁶ The sources of information in the remainder of this account of the operation of the Project are acknowledged as a series of documents prepared by the Central Alberta Regional School District Number Three Learning Assistance Field Service. These are:

1. "A Brief Overview of Possible Services." Red Deer, circa 1972. (Mimeographed)
2. "Discussion Topics for Participating School Systems." Red Deer, circa 1972. (Mimeographed)
3. "Role Description for Curriculum and Materials Specialists: Reading and Mathematics." Red Deer, circa 1972. (Mimeographed)
4. "Role Description for Reading Diagnostician." Red Deer, circa 1972. (Mimeographed)
5. "Role Description of Field Consultant." Red Deer, circa 1972. (Mimeographed)
6. "Role of School Psychologist." Red Deer, circa 1972. (Mimeographed)
7. "Some Facts and Figures." Red Deer, circa 1972. (Mimeographed)

Another major function of the Project staff was to seek the cooperation of outside agencies. Children believed to be suffering from learning disabilities caused by medical problems were to be referred to the body qualified to make such diagnoses. Project staff members, therefore, were expected to maintain contact with such institutions as the Alberta School for the Deaf and the Glenrose Mobile Clinic, and with medical personnel and the representatives of health units. When outside assistance was required for children with suspected psychological problems, the Project staff was expected to refer children to guidance clinics and to psychologists.

Diagnoses supplied by outside agencies were to be used by a consultant, in conjunction with the educational diagnosis he had made of a child, to assist in the preparation of a program which would cater for all facets of the child's disabilities.

Irrespective of whether reference to an outside agency had been made, the consultant would determine at what level the child was achieving and the level at which the child should have been achieving and then, with the assistance of the teacher, plan a course of action which was designed to improve the performance of the child. In preparing this course of action, the consultant would draw on his own experience but would use also the expertise of the other Project staff members.

The task of the teacher was then to instruct the child and to determine the effectiveness of the techniques and materials recommended. An important feature of the Project was that the Project staff would consult with the teacher at regular intervals to see whether the child was making progress. If the child was not achieving, the consultant and the teacher could consider a different approach to the problem.

The key feature of the operation of the Project was the regular, follow-up activity carried out by the consultants. Follow-up visits by a consultant allowed teachers to check that they were employing the correct techniques and enabled them to obtain assistance from the consultant for an extended program for any learning disabled child.

THE PROBLEM AND THE SIGNIFICANCE OF THE STUDY

The Problem

The problems with which this study was concerned were:

1. To develop a set of instruments which would provide information about the effectiveness of an organization.
2. To examine the effectiveness of the Learning Assistance Field Service Project operating in Zone 4 in Alberta.

Sub-Problems

To provide direction for the study a number of sub-problems were examined. The first of these sub-problems related to the proposition on which most of the instruments were based. The other sub-problems, once considered, enabled a decision to be made about the effectiveness of the Project. The sub-problems were:

1. To examine the relationships among environmental diversity, differentiation, integration and effectiveness.
2. To learn the degree to which the Project staff considered that the Project was effective.
3. To learn the degree to which principals considered that the Project was effective.
4. To learn the degree to which teachers considered that the Project

was effective.

5. To learn whether teachers changed their attitudes toward learning disabled children and projects similar to the Learning Assistance Field Service Project after being associated with the Project.

Significance of the Study

The study was based on the first year of operation of the Project. Therefore, the study has importance in terms of the subsequent years of the Project. Successful aspects of the Project can be reinforced and those features which are thought to be hindering the Project can be remedied.

The study may be further significant in that if the province provides assistance of a similar nature for learning disabled children in other parts of Alberta, the model used by Central Alberta Regional School District Number Three could be adopted with confidence. In this regard, the study may have findings which are of a national and even international significance.

The measuring devices developed for the study of the Project may assist other educational authorities in planning and in analyzing similar undertakings.

Delimitations of the Study

The study was restricted to the first year of operation of the Learning Assistance Field Service Project. No comparison was made with any other project aimed at assisting disabled learners and currently in operation in Alberta.

The effectiveness of the Project was determined by examining the degree to which prescribed goals were achieved in the opinions of

those associated with the Project. The achievements and progress of pupils were not measured as it was considered that outcomes of a project of this nature should not be measured until the Project has been completed.

Limitations of the Study

The possibility of various personal factors influencing the responses made by the Project staff, principals and teachers was recognized but was believed unlikely to bias the estimate made of the effectiveness of the Project.

Since integration could not be fully examined, those aspects of integration associated with conflict mediators may have escaped the scope of the study. The study is further limited by a reduced emphasis upon inter-organizational conflict except in the immediate environment of the Project.

A further limitation may be bias resulting from the novelty of the Project. The fact that assistance was being provided on a much broader scale than the assistance which had been available previously to most teachers of learning disabled children may have influenced the responses made by principals and teachers to questions about the Project.

ORGANIZATION OF THE THESIS

This Chapter has presented the historical background which led to the establishment of the Learning Assistance Field Service Project to assist learning disabled children. It has discussed the roles of Project staff members and the manner in which the Project was intended to operate. The purpose and significance of the study, as well as its

limitations and delimitations, have also been mentioned. In Chapter 2 the derivation of a theoretical framework for the analysis of the operation of the Project is given. Chapter 3 gives an account of the development of the instruments used to describe and evaluate the organization, while Chapter 4 discusses the application of the instruments. The description of the organization and its environment as seen by the Project staff is presented in Chapter 5. The opinions of the Project staff as to the effectiveness of the Project are discussed in Chapter 6. The impressions which principals and teachers have of the effectiveness of the Project and comments made by both of these groups about selected features of the Project are the concerns of Chapter 7. The question of whether there was any change in the attitudes of those teachers associated with the Project toward disabled learners and toward projects similar to the Learning Assistance Field Service Project is dealt with in Chapter 8. A summary of the study, the conclusions reached and the implications drawn are given in Chapter 9.

Chapter 2

DERIVATION OF THE FRAMEWORK FOR EXAMINING THE PROJECT

The aim of this study was to examine the Learning Assistance Field Service Project to see whether a suitable vehicle for achieving prescribed objectives had been provided. The literature on evaluation was surveyed with the aim of deriving a suitable framework to supply guidelines for the examination of the Project, but prior to designing such a framework, note was taken of some of the aspects of the more traditional forms of evaluation in education.

Evaluation

An appreciation of what educators understand by the term "evaluation" may be gained if some definitions of evaluation are presented as well as a brief mention of the types of evaluation which can be conducted in education. A statement of the reasons why evaluation is undertaken in education as well as a description of the evaluation models currently in use are also presented.

Definitions of evaluation. The Phi Kappa National Study Committee on Evaluation (1971:40) has defined evaluation as "the process of delineating, obtaining and providing useful information for judging decision alternatives." Popham (1972:1) believes that:

For most educators the term "evaluation" (means) appraising the worth of an educational undertaking Generally such evaluations are undertaken with a view to making decisions.

Other definitions (Guba, 1973:9; Kresh, 1969:34; Merriman, 1969:83; Stufflebeam, 1973:21) support the view that evaluations are conducted primarily to obtain information for decision makers. Alkin et al. (1969: 2) provide a definition which retains the collecting of information for decision makers as the purpose of evaluation but state that the type of decision to be made will determine the form that the evaluation will take.

Types of evaluation. Wrightstone (1969:11) identifies six different types of educational evaluation--"field oriented studies, laboratory studies, implementation studies, controlled experiment studies, longitudinal studies and case studies." Wrightstone (1969:6) also mentions the different ways in which data may be collected.

Reasons for evaluation. Finn (1973:11) claims that there are five reasons why evaluations are conducted. One of the reasons--"to provide information in order to adjust, discard, or otherwise change the application of an on-going educational process"--was particularly appropriate to this study.

Bradford et al. (1972:71) suggest that there are a number of benefits, principally associated with greater understanding, which accrue to teachers, principals, superintendents and boards of education when an evaluation of an educational institution is undertaken. These benefits in themselves may be sufficient reason to undertake an evaluation.

Evaluation models. Benefit to any particular group involved in an evaluation will depend partly on the stage of the operation at which the evaluation is conducted. Not all evaluations are conducted in terms of final outcomes. One of the evaluation models to which frequent

reference is made in the recent literature on evaluation in education is the Context Input Process Product Evaluation (CIPP) model for evaluating educational change. Stufflebeam (1973:23) declares the objectives of each of these stages of evaluation as:

Context Evaluation--To define the operation context, to identify and assess needs in the context, and to identify and delineate problems underlying the needs.

Input Evaluation--To identify and assess system capabilities, available input strategies, and designs for implementing the strategies.

Process Evaluation--To identify or predict, in process, defects in the procedural design or its implementation and to maintain a record of procedural events and activities.

Product Evaluation--To relate outcome information to objectives and to context, input, and process information.

Stufflebeam includes a description of the method of analysis to be used with each evaluation and the types of decisions made at the end of that evaluation.

An evaluation model which gives directions for all phases of an educational undertaking is provided by Klein et al. (1971:9-12). The framework includes steps for a "needs assessment," "program planning," "implementation evaluation," "progress evaluation" and an "outcome evaluation." All of these stages are important but the one which is most relevant to this study is the "progress evaluation" stage. The steps in this stage are discussed below:

1. "Determine the contextual factors influencing the implementation and progress of the evaluation program."--An organization should be considered in relation to its environment. Two or more organizations could possess the same structure and have the same objectives but because of their particular modes of operation could operate in different segments of an environment. For example, the physical location of the components of the organization could result in different parts of an

environment being encountered and different demands being made of the organization.

2. "Review and modify procedures and strategies (in the evaluation plan) for determining extent to which the program goals are being achieved." Procedures for assessing the progress being made toward the fulfilment of final goals should come under review both as a project continues and as the evaluation develops.

3A. "Assess the extent to which the program goals are being achieved."¹ Providing that program goals are not final outcome goals or that outcome goals are not sequential this step is where the evaluator will concentrate his efforts.

Occasionally, after a program has been in operation for a short time, evaluators are asked to predict whether program goals will be achieved. If the organization has specified intermediate goals or goals which are not final but which, if achieved, will facilitate the obtaining of final goals, the task of the evaluator is simplified considerably. When intermediate or enabling objectives are obtained the chances of program achieving its desired outcomes may be much greater.

3B. "Examine unanticipated consequences." Occurrences which were unforeseen should not be ignored if they are encountered as they may negate the efforts to achieve outcome goals by all of those associated with a project.

4A. "Determine the reasons for any discrepancies between planned and actual progress."² Once discrepancies are revealed the important fact

¹ Steps 3A and 3B are shown by Klein et al. to occur at the same time.

² Steps 4A and 4B are also shown to occur at the same time.

which the evaluator must establish is to learn why these discrepancies occurred.

4B. "Determine effects on any discrepancies between planned and actual progress." If a project is not keeping to plan, an attempt should be made to estimate the possible effects on the final outcome.

5. "Report to the decision maker." A report of the above activities will give the decision maker information on which he can base his decisions.

Stufflebeam's (1973:23) assessment of a progress, or "process evaluation" as he terms it, may be worth noting at this point:

The overall strategy is to identify and monitor, on a continuous basis, the potential sources of failure in a project. These include interpersonal relationships among staff and students; communication channels; logistics; understandings of and agreement with the intent of the program by persons involved in and affected by it; adequacy of the resources; physical facilities; staff, and time schedule; etc.

Stufflebeam has drawn attention to the fact that the success of a program hinges on personal as well as physical factors. Having all of the physical resources required to ensure a program will operate may not be sufficient. Success may elude the organizers of a program if there is a breakdown in interpersonal relationships.

Effectiveness

The process model of evaluation discussed above provides a guide to the type of evaluation to be undertaken but offers little in the way of suggesting how the effectiveness of an organization might be studied.

As a suitable framework for conducting the type of evaluation planned for the Learning Assistance Field Service Project could not be located in the literature on evaluation in education recourse was made to the literature on the evaluation of other types of organizations.

What was being sought was a framework which, while providing the means to obtain an estimate of the effectiveness of an organization, would also allow conclusions to be drawn as to why the organization was or was not effective.

The need for a framework such as this raised the question of how to determine the effectiveness of an organization. Yuchtman (1966:1) is of the opinion that "the literature on this subject leads to the conclusion that the concept of organizational effectiveness is at best vaguely defined or, worse, undefined but assumed to be understood." Katz and Kahn (1966:150) state that "the existence of the problem of developing satisfactory criteria of organizational performance is clear enough; its solution is much less obvious."

In his book, Assessment of Organizational Effectiveness, Ghorpade has included a number of articles which deal with the "theoretical considerations in studying organizational effectiveness" and with the "criteria of organizational effectiveness." After considering the schemes and models in the Ghorpade collection, an impression which might be gained is that once attention is directed away from readily measurable evidence of effectiveness such as the volume of production or profit, the difficulty of collecting data with which to test other criteria increases considerably.

After production and profit, the most popular criterion would appear to be goal attainment. Thompson and McEwan (1958:23) claim that "in the analysis of complex organizations the definition of organizational goals is commonly utilized as a standard for appraising organizational performance." Etzioni (1964:8) is in agreement with this claim. He states that, "the actual effectiveness of a specific organization is

determined by the degree to which it realizes its goals." Etzioni adds that, "measuring effectiveness and efficiency raises thorny problems."

If, as Hall (1973:3) claims, "the most common basis for measuring effectiveness in schools is probably the attainment of educational goals and objectives," the form in which the objectives are stated should be taken into consideration. Mazur (1969:53) notes that "objectives that create problems in terms of evaluation are usually too general, ambiguous and emphasize project implementation rather than product development." He gives a number of examples of such objectives among which are: "To improve achievement;" "To provide reading for selected pupils;" and "To raise the aspirations of disadvantaged youth."

Final outcomes of an educational undertaking can often be assessed with data which are quantifiable. For example, if one of the goals of a project is to raise by 10 points the average mark obtained by a group on a standardized arithmetic test, it is possible to determine precisely the progress that has been made toward that goal. Progress toward final outcomes which are not seen as being so readily quantifiable can also be measured in a quantifiable manner. For example, the opinions of a group asked to indicate preferences on a Likert-type scale could be summed and averaged. The opinions a group holds with regard to "mid-stream" goals or enabling objectives could be treated in a similar fashion. In this study, where final objectives are not being measured, it was the degree to which enabling objectives were achieved which was used as a measure of the effectiveness of the organization as it proceeded towards meeting its final goals.

Many of the difficulties associated with using a goal approach centre on the identifying of goals. When goals are specified (in terms

of behavioral objectives) by the organization this problem is reduced. Popham (1972:15) suggests that although goals which can be evaluated readily are to be preferred, an organization might have some goals which are not as easy to measure. He states:

While recognizing that non-measurable goals will be of limited use for his purposes, the educational evaluator must be aware that instructors may wish to devote a reasonable proportion of their efforts to the pursuit of important but currently unassessable objectives.

Organizations, as well as instructors, may prescribe "unassessable objectives" and while goal achievement was used as the major criterion of success in the evaluation of the Learning Assistance Project, attention was paid to objectives to see whether or not they were "assessable."

A framework for the evaluation of an educational undertaking which was in progress might have been developed from the model provided by Klein et al. but this framework may not have identified causes of the success or failure of a program.

THE LAWRENCE AND LORSCH STUDY

The task of deriving a suitable framework was assisted considerably by a recent study of the effectiveness of organizations undertaken by Paul Lawrence and Jay Lorsch. The Lawrence and Lorsch study was concerned with the question, "What kind of organization does it take to deal with various market and economic conditions?" (Lawrence and Lorsch, 1967a:1).

To obtain answers to this question they "made a comparative study of competing organizations in each of several industries" (Lawrence and Lorsch, 1967a:19). Their investigation began with a study of six competing firms in the plastics industry. These firms were ranked as to

their effectiveness which was determined by the increase in sales and profit, and the number of new products introduced as a percent of present sales (Lawrence and Lorsch, 1967a:39). The firms were categorized as high, medium and low performing and subjected to a detailed examination. Attention was then directed to the container industry and the food industry where similar analyses were made of one high-performing and one low-performing organization from each industry. From the results of their study they were able to identify characteristics common to effective organizations.

The Environment

When studying an organization, Lawrence and Lorsch commenced by gaining a general impression of the organization. Then, they concentrated their attention on the environment. They commented, "Before we could begin an examination we had to learn what demands the environment placed on organizations within it" (Lawrence and Lorsch, 1967a:24). Within the plastics industry they saw three environmental sectors--"scientific," "market," and "techno-economic." For each of these sectors they studied three factors: "clarity of information"--"what all the relevant knowledge on a topic was and just how certain it was" (Lawrence and Lorsch, 1967a:25); "uncertainty of causal relationships"--an understanding of the relationship between cause and effect; and "time span of definitive feedback"--the time it took for the result of decisions in various areas to be learned by those who had made them.

By quantifying answers given to interview questions and to questionnaires by top executives in each organization, Lawrence and Lorsch were able to establish scores for clarity of information, uncertainty of causal relationships and time span of definitive feedback.

These scores were summed to give a total score which they termed a "total uncertainty score." The higher the uncertainty score the greater the diversity in the environment.

The differences in scores for the three major aspects which Lawrence and Lorsch examined in the environment, led them to believe that each functional department within a organization would have a different task (1967a:30). They hypothesized that the more uncertain the environment the higher the degree of differentiation required within the organization.

Klein et al. (1971:10) had suggested in the first step of their evaluation model that consideration should be given to the influence the environment has on the "implementation and progress of the educational program." In paying attention to the environment Lawrence and Lorsch would appear to have foreseen this requirement imposed by Klein et al.

Differentiation

Differentiation they defined as:

. . . the state of segmentation of the organizational system into subsystems each of which tends to develop particular attributes in relation to the requirements posed by its relevant external environment (Lawrence and Lorsch, 1967b:3).

The components of differentiation they saw as being formality of structure, interpersonal orientation, time orientation and goal orientation. Formality of structure was evaluated by considering such factors as:

. . . the span of supervisory control, number of levels to a supervisor shared with other departments, the specificity of review of department performance, the frequency of review of department performance, the specificity of review of individual performance, and the emphasis on formal rules and procedures (Lawrence and Lorsch, 1967a:255).

Lawrence and Lorsch used Fiedler's "Least Preferred Co-Worker" instrument to obtain a measure of interpersonal orientation. Managers were asked to complete the Least Preferred Co-Worker instrument and the score each manager obtained on the instrument became his interpersonal orientation score. The interpretation Lawrence and Lorsch gave to time orientation centred on whether managers had a long-term or short-term approach to their tasks. They believed that time orientation would be related directly to the time it took feedback to reach managers and, for this reason, they expected research personnel to have more distant goals than personnel in sales or production. They noted that "it should be emphasized . . . that structure and time orientation appear to vary in almost a linear relationship to the certainty of the task" (Lawrence and Lorsch, 1967a:36). Goal orientation was measured, "by asking managers to indicate their concern with nine different decision-making criteria" (Lawrence and Lorsch, 1967a:37). The answers allowed Lawrence and Lorsch to determine the degree of intensity which managers focussed on departmental goals.

An examination of the formality of the structure of the organization, interpersonal orientation, time orientation and goal orientation permitted Lawrence and Lorsch to comment on the degree of differentiation of an organization. They had said:

If we could investigate and compare organizations in several different environments, we might provide a systematic understanding of what states of differentiation and integration are related to effective performance under different environmental conditions (Lawrence and Lorsch, 1967a:17).

Integration

Once differentiation had been defined and its components identified, Lawrence and Lorsch (1967b:3) turned their attention to integration.

Integration was defined as, "the process of achieving unity of effort among the various subsystems in the accomplishment of the organization's task."

Lawrence and Lorsch believed that successful integration depended on effective conflict resolution. They believed that integration could be achieved through the organizational hierarchy, through individual integrators or integrating committees or teams, through formalized standard operating procedures and through the informal actions of managers (Lawrence and Lorsch, 1967a:12), but in studying conflict resolution, they concentrated on six factors: the intermediate position of integrators; the influence of integrators; the reward system for integrators; the total level of influence; the level at which influence was centred; and the modes of conflict resolution used. Data were obtained from interviews and questionnaires which enabled the investigators to state, according to the characteristics they were studying, whether an organization had achieved a high, medium or low degree of integration.

Fox, in a foreword to the report of the study by Lawrence and Lorsch, stated, "There is clearly no single best way for firms to organize in all situations," (Lawrence and Lorsch, 1967a:vi), but Lawrence and Lorsch (1967a:157) claimed that "if an organization's internal states and processes are consistent with external demands the findings of this study suggest that it will be effective in dealing with its environment."

Table 1 gives a summary of the characteristics of effective organizations in the plastics, food and container industries.

The table shows that all effective organizations had a high

Table 1
Characteristics of Effective Organizations

Industry	Environment Diversity	Differentiation	Integration
Plastics	High	High	High
Foods	Moderate	Moderate	High
Container	Low	Low	High

Adapted from C.W. Dalton, P.R. Lawrence, and J.W. Lorsch (eds.) Organizational Structure and Design. Homewood, Illinois: Richard D. Irwin, Inc. and The Dorsey Press. 1970. Figure 5, p.13.

degree of integration. As this would appear to be an important characteristic, note should be made of the findings of Lawrence and Lorsch with respect to the components of integration which they selected for investigation.

Intermediate position of integrators. Lawrence and Lorsch had hypothesized that an integrator would have a greater chance of success if he adopted a "mid-way" position and did not side with any party of a conflict (Lawrence and Lorsch, 1967a:59).

Influence of integrators. They found that, "integrators in high performing organizations were seen as influential while those in other organizations were not" (Lawrence and Lorsch, 1967a:66).

Reward system for integrators. Integrators in high performing organizations were more concerned with the total product rather than their own performance and these integrators believed that their performance was less important in their evaluation by a superior than was

the overall performance of the organization (Lawrence and Lorsch, 1967a: 69).

Total level of influence. Managers in the effective organizations reported that they had more influence within their organizations than did the managers in the not so effective organizations (Lawrence and Lorsch, 1967a:70).

Influence centred at the required level. The investigators found that in the effective organizations the successful integrators were people who were not too far up in the hierarchy to have the working knowledge to solve the particular problem but not too far down so that even though they may have had the knowledge they lacked the authority to put their knowledge to advantage.

Modes of conflict resolution. Lawrence and Lorsch (1967a:74) stated that in the six organizations which they studied, managers were of the opinion that conflict was best resolved through confrontation. They found that the managers of the two most successful organizations used the confrontation method of conflict resolution significantly more than did the managers in the other organizations.

ENVIRONMENTAL VARIABLES, CONFLICT AND POWER

The Lawrence and Lorsch methodology provided the base for the framework used to study the Project. The information required for the study which an application of the Lawrence and Lorsch technique could not provide was obtained by gathering additional information about environmental variables, conflict, conflict resolution and power.

Environmental Variables

Some educationists may believe that the analysis of an industrial organization is not applicable to an organization located in a school setting. Derr and Gabarro (1972:35) have said that, "undoubtedly the greatest problem in the school systems setting is the problem of defining environment."

At first glance the environment of the Project would appear to be much wider than the environment of a business firm. Merriman (1969:84) gives an indication of the diversity of an education environment when he states that "an educational community consists of those persons in a community who have an interest in education - parents, teachers, students, administrators and often, just interested citizens."

Merriman's comment suggests that the bounds of an education environment are the same as those which exist for a community. The researcher in education who needs to identify the environment may be concerned by the remarks of Merriman and of Derr and Gabarro. An observation by Miklos (1970:7) may help to relieve the concern of the researcher. Miklos notes that:

It might be said of the environment in general that while it appears on the surface to be as broad as society itself, in reality a school district is forced to respond to a relatively small number of environmental units which are geographically concentrated.

Miklos (1970:8), in discussing the "relevant environment" as part of "a model for analyzing organizations," supplies seven environmental variables which have relevance for describing the environment in which the Learning Assistance Project operates. These variables are:

1. "Scope: number of units in relevant environment and geographical dispersion."

The number of units with which the organization must deal in each

particular environment can be used as a measure of diversity within the environment.

2. "Diffuseness or specificity of environmental interest."

On the one hand interest in the institution may be widespread and on the other hand, there may be certain sectors in the environment which are particularly interested in a certain feature of the system.

3. "Degree of integration of relevant environment."

This is specified as an environmental variable but under the Lawrence and Lorsch framework the aspect of integration which is examined is the degree of integration existing within the organization, and the degree of integration existing between the organization and each external institution with which it deals.

4. "Supportiveness of the environment."

The assumption is made that the environment does not oppose the continued existence of the organization, and has knowledge of the organization.

5. "Pressure from the environment."

The extent to which the environment attempts to influence the operation of the organization is a factor to be considered.

6. "Certainty and predictability of environmental conditions."

A measure of the certainty of the environment may be obtained from the degree to which day-to-day events are considered predictable.

7. "Stability of the setting".

This variable would appear to relate to factors which are more long-term in nature such as "cultural, social, political and economic conditions."
(Miklos, 1970:8)

With the exception of variable number 3 "Degree of integration of relevant environment" which is a key factor in the Lawrence and Lorsch

model, the variables supplied by Miklos are suitable for describing the environment in this study. These variables, when included with the three descriptors of the environment used by Lawrence and Lorsch, serve as a framework on which to base questions the answers to which may allow a description of an environment to be provided.

Conflict

The Lawrence and Lorsch methodology for investigating integration is most comprehensive but could not be used in this study. Lawrence and Lorsch had investigated the conflict existing among departments within an organization. As the Project organization did not have departments, the consultants were not highly dependent on one another and there was no conflict within the organization, five of the six aspects of integration examined by Lawrence and Lorsch were considered not to be relevant. The five aspects not investigated were: (1) intermediate position of integrators; (2) influence of integrators; (3) reward system for integrators; (4) total level of influence; and (5) level at which influence is centred. This was because there was no need for an integrator or an integrating department within the Project organization.

The only aspect of the Lawrence and Lorsch methodology which was considered relevant was the mode of conflict resolution used by the organization. The Lawrence and Lorsch (1967a:266-267) procedure of asking respondents to state whether the particular method of conflict resolution implied in certain proverbs occurred in the organization was not used.

Although the Lawrence and Lorsch methodology was not applied in this study, conflict resolution was considered by Lawrence and Lorsch to be important and may in fact be the most important aspect in

determining whether an organization is effective.³

In order to estimate the degree to which conflict occurred, or was likely to occur, within an organization all of the possible causes of conflict had to be identified. As no conflict-identifying instrument could be found an extensive review was made of the literature on conflict with the intention of isolating the major causes of conflict within organizations and incorporating these causes in a conflict-measuring instrument. Emphasis in the review was directed to such subjects as types of conflict, causes of conflict, conflict in organizations, techniques of conflict resolution and conflict and power.

Types of conflict. Pondy (1967:297-298) recognizes three categories of conflict. He identifies "bargaining" conflict as conflict resulting from various bodies competing for scarce resources, "bureaucratic" conflict which is conflict between office holders in the various levels of the hierarchy, and "systems" conflict which is conflict among members of the organization who are at the same level.

Pondy considers each of these types of conflict as conceptual models. He believes that in budgeting conflicts, staff-line conflicts or labor-management conflicts, the bargaining model can be used to obtain a measure of the extent of a conflict by observing the difference between the volume of resources available and the summed demands of all of those organizations concerned. In an organization, conflict of this nature

³ In recognition of the fact that this study used concepts developed by Lawrence and Lorsch the term "integration" has been retained even though use was made of only the section relating to the mode of conflict resolution. The term "integration" was used in this study when reference was made to factors associated with conflict and conflict resolution.

rarely goes beyond the bargaining stage as scarce resources are allocated through administrative procedures which have been developed for this purpose. Another factor preventing the escalation of conflict in these situations is that the bargaining is usually done by specialists who may not have a personal interest in the issue but merely represent the parties involved.

The bureaucratic model is used to study conflict which occurs within the hierarchical structure of an organization. Conflict arises because supervisors attempt to control subordinates and subordinates rebel. The hierarchy tends to react to the conflict by replacing personal control with impersonal rules. In many instances, this has led to greater conflict. This may be due partly to the fact that subordinates can no longer rely on a superior to have the same goals as they do.

Pondy claims that the systems model can be used to study conflict which occurs among people at the same level in the hierarchy. Conflict among people who are of equal status can be of both an intra and inter-personal nature and can occur for a host of reasons.

Auburt (1963:26-42) provides another classification of conflict. He identifies conflicts resulting from differences in values and beliefs and conflicts arising because of opposing interests. Conflicts based on differences in values and beliefs are difficult to resolve as they involve the personality of the individual. Values and beliefs have become instilled over many years and if a situation calls for actions which are in opposition to these beliefs conflict will result.

Scarcity is responsible for bringing about conflict based upon differences of interest. If two parties are interested in obtaining a particular good or service which is limited in supply, conflict may result.

Auburt believes that in these situations the most equitable solution is achieved when both parties curb their demands to the degree that their potential loss is minimized.

Bailey (1971:233-239) believes that educators have spent too long searching for a definition of conflict when they should have been concentrating on developing a typology of conflicts. Among the typologies he suggests are:

1. A typology in which are categorized the conflicts which affect the administrator in some way--whether they be conflicts in which the administrator is involved directly either with superiors, with others of equal status or with subordinates, or conflicts which go on about him but in which he is not directly involved.

2. A typology which considers positive and negative conflicts. Positive conflict is considered as conflict which keeps the organization in a dynamic state while negative conflict is conflict which hampers the goals of the organization.

3. A typology of horizontal and vertical conflict. Horizontal conflict is seen as conflict between two entities of equal status competing for the control of a particular segment of the organization; and vertical conflict being considered to be conflict between different hierarchical levels for the right to be responsible for some matter of organizational procedure.

4. A typology which classifies conflict according to its severity or intensity--ranging from conflicts which are due to personality factors, to conflict over the objectives of an organization and resource allocation which may be partly as a result of vested interests or partly as a misinterpretation of the objectives, through to conflict which is

based on a questioning or challenging of traditional beliefs, or standards.

Causes of conflict. According to Le Vine (1961:3-15) there are three categories into which causes of conflict fall. These are economic, structural and psychological.

Economic causes are listed in most classifications (Boulding, 1957:131-134) for example. Le Vine states that conflict may result from competition for the factors of production--land labor or capital, or from competition for "prestige goods," for "employment opportunities" or for "status and authority."

Structural causes are seen in the conflict which results from the degree of interaction, the hypothesis being that the greater the degree of contact the greater the possibility of conflict. Structural causes are also seen in conflict resulting from situations where there is "role or status ambiguity."

The psychological factors acting within the individual account for other conflict situations. Le Vine believes that these causes stem from the environmental conditions the individual encountered as a child and from the frustrations and motivating influences, other than those related to economic factors, which the individual experiences from day to day.

Le Vine's classification of causes which is taken from studies in anthropology, is very similar to Boulding's (1957:131-134) classification of types of conflict.

Goldman (1966:328-353) identifies a "formalization" process, a "socialization" process and an "investiture" process in conflict. These

processes relate respectively to conflict over task expectations, over role performances and over incumbency situations.

He claims that conflict over task expectations arises when members of an organization or members of different organizations see different relationships between tasks and goals. Conflict may also occur when members are uncertain as to the particular actions specified in the task expectation and as to the task expectations for a particular position within an organization (Goldman, 1966:339).

Conflicts of this nature can be resolved by changing the task expectations of the organization or by regrouping areas of responsibility within the organization. This may involve bringing together under the one position task expectations which were previously unrelated. It may also involve specifying the precise expectations of a particular position. In some situations the expectations of the group members may change due to consensus or because of a greater appreciation of the factors involved. The passing of time accounts for other changes in expectations.

Conflict relating to the socialization process refers to the personal actions of the role incumbent rather than to the task expectations of the position. The individual is given a variety of cues during his daily actions as to which behaviors are acceptable. If he does not comply with group expectations he is likely to be faced with charges of incompetency. He is expected to modify his behavior and become socialized in his role expectation. If he does not do this and if sufficient pressure is brought to bear on him he may be obliged to withdraw from the situation.

In practice, conflicts of this nature are resolved through the group socializing the individual or through the individual changing the

attitudes of the group so that they accept his behavior. A third resolution technique is for the group to meet and discuss the desired behavior expected of the individual and of the group.

Goldman (1966:341) explains the investiture process as conflict arising from such situations as:

- (1) those in which there are two or more candidates for incumbency;
- (2) those in which change is sought for the group's definition of a "legitimizing situation;" and (3) those in which the composition of the investing membership (that is, the members whose consent is necessary) is undergoing challenge or change.

Conflict in organizations. Katz (1964:105-114) identifies three types of conflict which occur within organizations--"functional conflict induced by various subsystems within the organization," the conflict arising from the "struggle between functional units in direct competition with one another," and "hierarchical conflict stemming from interest-group struggles over the organizational rewards of status, prestige and monetary returns" (Katz, 1964:105-106).

The three types of conflict are explained as follows. Functional conflict may occur within an organization when a subsystem with a specific function has outlooks and priorities which are at variance with those of another subsystem which has a different function. Conflict caused through competition is common. Conflict can occur whenever subsystems with similar functions engage in competition with one another. Conflict may result even when this competition is between friendly rivals. Hierarchical conflict may occur among the various levels of the hierarchy of an organization. If one level of the hierarchy seeks, through open or devious means, to gain rewards such as those of "status, prestige, power and psychological satisfactions accruing from interesting and

even challenging work," (Katz, 1964:106) at the expense of another level, conflict may result.

Katz suggests three strategies for dealing with conflict in organizations. One of these strategies is to change the structure of the organization so that the conflict occurring at present among the different hierarchical levels is eliminated. Such a move may solve the immediate problem but it may also produce a new conflict situation. A second strategy which may enable conflict to be overcome is to order participants to forget their differences and to work together, or by moving employees within the organization until people who were able to work with one another were grouped together. The third strategy Katz offers is to appoint mediators within the organization.

Techniques of Conflict Resolution

Five techniques traditionally used to resolve conflict are the forcing, smoothing, compromising, withdrawing and confrontation methods.

Forcing. Forcing involves the use of some form of force such as threat or physical aggression. The superior who uses coercive power is using a forcing method.

Smoothing. Smoothing, as the name suggests, involves the suppression of conflict by placating opposing parties. The smoothing technique is used frequently, possibly because it prevents violent conflict.

Compromising. Compromising allows a solution to be achieved which allows both parties to win some advantage. Many bargaining episodes end in a compromise.

Withdrawing. Withdrawing is observed when one party to a conflict withdraws or uses some form of withdrawal such as not admitting that a conflict situation exists.

Confrontation. Confrontation is the name given to the technique which involves the parties in conflict discussing all of the issues involved in a problem and arriving at a solution which is the best of a number of alternatives.

Power Bases

Before concluding the discussion on conflict, brief reference should be made to the concept of power, or, in particular, to the uses of various power bases. The use of a particular power base may cause conflict to occur within an organization.

Power bases which are recognized in the literature are informational, referent, legitimate, expert, coercive and reward power.

Informational power. Informational power is the power that enables A to control B and occurs when A is able to provide B with information which B accepts and subsequently uses to modify his behavior.

Referent power. Referent power involves identification. A's objective is to persuade B that B has the same goals as A or is the same sort of person as A and should therefore do as A suggests.

Legitimate power. Legitimate power is the power a person has by virtue of his position in an organization. It is strengthened by the deference other members in the organization show to the holder of this position.

Expert power. Expert power is the power a person has because he is seen as an expert in a particular field. This person may have obtained his knowledge through specialized training, be particularly intelligent or have experienced similar situations in the past.

Coercive power. Coercive power involves threatening subordinates.

Reward power. Reward power is the control A has over B because A has the ability to grant rewards to B. In some circumstances it is possible to see reward power as a form of coercive power.

The power base to which a superior might resort to resolve conflict may depend on the personality of the superior and the particular situation. Raven and Kruglanski (1970:79) suggest that the subordinate will change his overt behavior regardless of the power base used by the superior. They show that if the superior uses reward power the subordinate will "move away" from the superior, and if the superior uses coercive power the subordinate will "move against" him. This would imply that the use of coercive power and, to a lesser extent, reward power, may resolve conflict temporarily but, in Pondy's terms, will leave a greater conflict aftermath than the use of the other types of power.

THE FRAMEWORK

The role of evaluation had been examined and models of evaluation had been considered, but it was not until the investigation undertaken by Lawrence and Lorsch (1967) was studied in detail that the basis of a framework for analyzing an educational organization was established. The environmental descriptions used by Miklos (1970) and the

characteristics of conflict drawn from the literature on that subject were incorporated with the findings of the Lawrence and Lorsch study to complete the framework.

The framework which was developed considered the major segments of the environment in which the organization operated, the degree of differentiation within the organization, and the degrees of integration between the Project and each of its environmental segments.⁴

The Environment

By using Lawrence and Lorsch's (1967) concepts of "clarity of information," "uncertainty of causal relationships" and "time span of definitive feedback," and Miklos's (1970) concepts of "scope," "diffuseness," "supportiveness," "pressure from the environment" and "certainty of the environment," a framework was devised for examining the environment. Within this framework questions were constructed, the answers to which gave a picture of the three major segments of the environment in which the Project was operating.

Differentiation

Among the dimensions Lawrence and Lorsch (1967) used to obtain a measure of differentiation were "formality of structure," "time orientation" and "goal orientation." These dimensions were considered to provide a suitable framework for establishing the degree of differentiation within the organization being studied. Not all of the structural characteristics employed by Lawrence and Lorsch were used in this study.

⁴The only segments of the environment with which this study was concerned were the Board segment, the school segment and the outside agencies segment. References to "each" segment or the "three" segments or the "major" segments apply only to these three segments of the environment.

The organization of the Project was such that there was only one hierarchical level--consultants had equal status and were responsible to the Director. This meant that the characteristics of "average span of control" and "number of levels to a shared supervisor" did not need to be included in an interview schedule as they could be obtained from the organization chart (Figure 3).

Integration

Because Lawrence and Lorsch had found a high degree of integration to be a factor common to all effective organizations, this characteristic was considered most important, but only one of the measures used by Lawrence and Lorsch was considered applicable to this study. Lawrence and Lorsch had been able to identify sub-units in the organizations they studied and were concerned with the states of integration existing among these sub-units. There were no sub-units in the Lawrence and Lorsch sense in the Project organization but the concept was believed to be too important to ignore. For this reason attention was directed to an investigation of the states of integration existing between the Project and each major segment of its environment. To do this a framework was developed from the review of the literature on conflict.

The causes of conflict which were considered were:

1. Conflict arising from bargaining over scarce resources.
2. Conflict occurring among people at different hierarchical levels in a bureaucracy, or conflict arising from inflexible organizational rules of procedure.
3. Conflict occurring among people who are at the same level in an organization.

4. Conflict occurring among people who hold different values and beliefs.
5. Conflict arising from differences of opinion over who has authority in a particular situation.
6. Conflict occurring because one individual or group is uncertain of the status of another individual or group.
7. Conflict arising from personality differences which occur among people.
8. Conflict arising from the different views people have over the tasks which are associated with a particular role.

This was the framework derived for describing the environment in which the Project operated and for determining the states of differentiation and integration which existed within the organization and between the organization and each environmental segment.

The framework for determining the effectiveness of the organization centred on an instrument containing questions about the enabling objectives which had been stated for the Project.

PROCEDURE

Once the literature on evaluation, organizational effectiveness and conflict had been reviewed and a framework for studying the Project had been derived, measuring instruments were developed and applied. From the data obtained from the instruments conclusions were drawn as to the effectiveness of the Project. The complete procedure which was followed in the study is shown in diagramatic form in Figure 5.

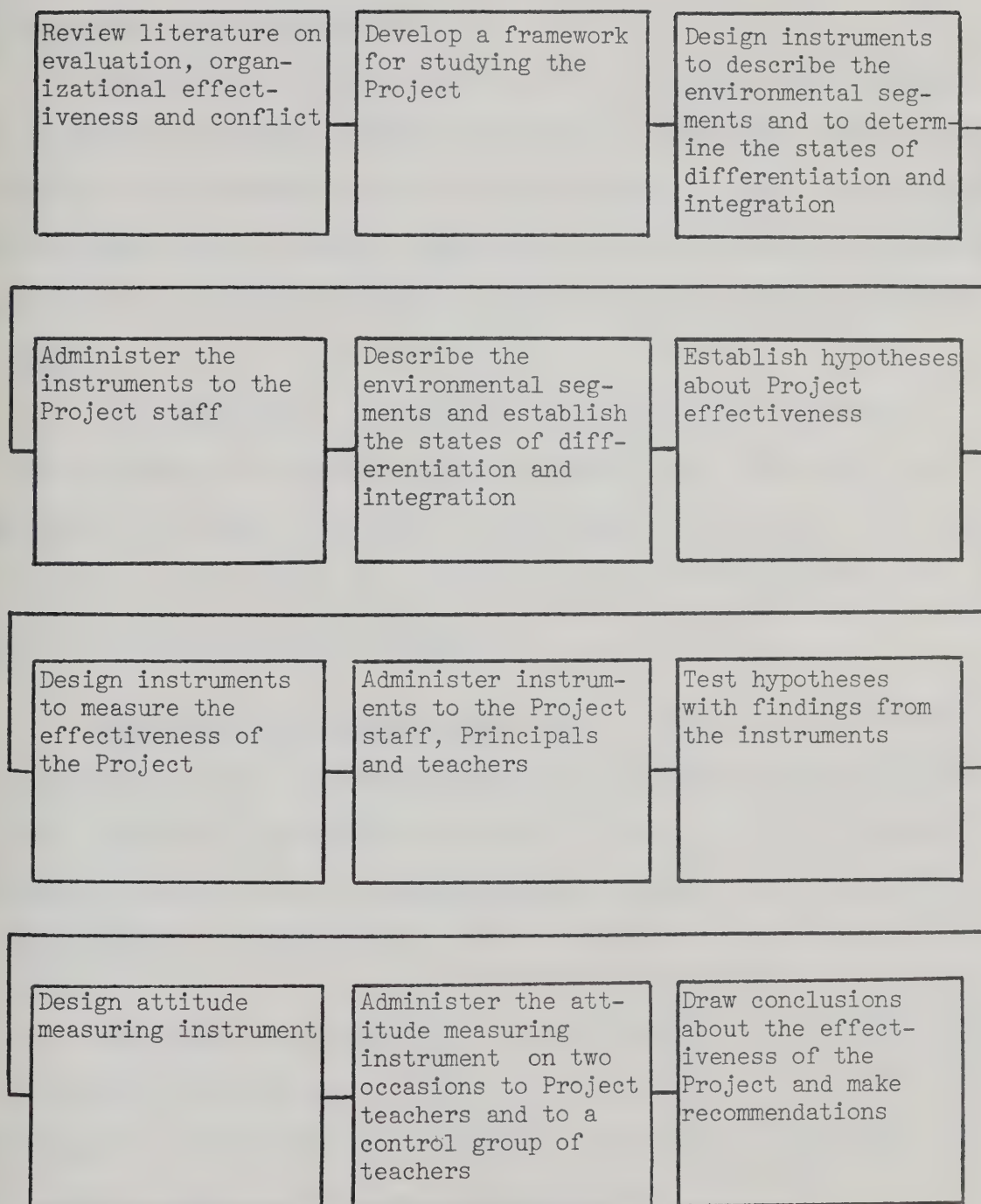


Figure 5

Procedure Followed in the Study

Development of the Instruments

Instruments were developed in order to describe the environment, to determine the states of differentiation and integration existing within the Project and between the Project and each major segment of the environment respectively, to measure the degree to which consultants, principals and teachers considered the Project effective, and to measure attitude change.

The environment. To describe the environment in which the Project operated, the concepts used by Lawrence and Lorsch (1967) and by Miklos (1970) were incorporated in an interview schedule. The responses to questions in the schedule permitted a description to be made of each environmental segment.

The state of differentiation. The procedure used by Lawrence and Lorsch (1967) for describing the state of differentiation existing in an organization was adopted and used to form an interview schedule which allowed the state of differentiation existing within the Project organization to be determined.

The states of integration. An interview schedule developed from the review of literature on conflict was used to describe the states of integration existing between the Project and the Board, the Project and the schools and the Project and outside agencies.

The effectiveness of the Project. Enabling objectives had been prescribed for the Project. These objectives were adapted to form questions which were included in the questionnaires developed for administration to consultants, principals and teachers.

Attitude measuring instrument. The attitude measuring instrument was constructed by selecting concepts believed to be associated with the Project and adjective pairs commonly employed in the construction of semantic differentials, and combining them in an attitude measuring instrument. A pilot study of the instrument was conducted to test the validity of the concepts and reliability of the adjective pairs, and then the instrument was administered in the early stages of the school year to a group of teachers in schools participating in the Project and to another group of teachers having no connection with the Project. The instrument was readministered to both groups in the latter part of the school year to see whether any change in attitude had occurred.

SUMMARY

This Chapter has discussed the role of evaluation in education and has noted that evaluations are conducted to gather information which can be used to assist in judging the value of an educational undertaking. An appraisal can lead to changes in an education process after the process has been completed or while it is in operation.

Procedures for evaluation which were mentioned were the Context, Input, Process, Product Evaluation (CIPP) model and the model proposed by Klein et al. (1971) for a progress evaluation.

Attention was directed to the problems of determining the effectiveness of organizations and to difficulties associated with using goal achievement as a criterion of effectiveness.

The study of organizational effectiveness undertaken by Lawrence and Lorsch (1967) was considered in detail. The technique used by Lawrence and Lorsch was to examine an environment to see what demands

it placed on an organization. They found that successful organizations were those which were sufficiently differentiated to meet the demands of the environment while, at the same time, possessing a high degree of integration. Integration was found to depend on techniques of conflict resolution which were acceptable to all concerned.

Reference was made to the variables discussed by Miklos (1970) for describing an environment.

Conflict resolution was considered to be a key factor in the determining of the state of integration. A review of some of the literature on conflict was conducted with the aim of identifying situations when conflict might occur. Guidelines for determining the state of integration existing between the Project and each major segment of its environment were developed from the review of the literature.

A description of the framework developed for analyzing the Project was given. The framework was concerned with three components--the major segments of the environment in which the Project operated, the degree of differentiation within the Project organization, and the states of differentiation which existed between the Project and each major segment of its environment.

The framework can be summarized as:

1. The environment. A description of an environment could be obtained from answers to questions concerned with: (1) clarity of information, (2) uncertainty of causal relationships, (3) time span of definitive feedback, (4) scope of the environment, (5) diffuseness of the environment, (6) supportiveness of the environment, (7) pressure from the environment, and (8) certainty of the environment.

2. Differentiation. The state of differentiation existing within

an organization could be determined by considering the following:

(1) formality of structure, (2) time orientation, and (3) goal orientation.

3. Integration. The degree of integration existing between an organization and the segments of the environment within which it operates could be estimated from answers supplied to questions dealing with the following causes of conflict: (1) conflict arising from the allocation of scarce resources, (2) conflict occurring within bureaucracies, (3) conflict between individuals sharing the same status, (4) conflict resulting from people holding opposing beliefs, (5) conflict over who has authority in a situation, (6) conflict caused through one party being uncertain of the role or status of another party, (7) conflict developing from personality differences, and (8) conflict arising from differences of opinion over the tasks associated with a particular role.

The Chapter concluded with a description of the procedure followed in the study.

The development of the instruments based on the framework derived in this Chapter is discussed in Chapter 3.

Chapter 3

CONSTRUCTION OF THE INSTRUMENTS

In Chapter 2, the derivation of a framework for appraising an organization was described. This Chapter discusses the construction of the instruments used to gather data.

The aims were to obtain descriptions of the three major segments of the environment in which the organization operated, to obtain a measure of the degree of differentiation existing within the organization and to derive estimates of the degrees of integration existing between the organization and each segment of its environment. To test the hypotheses which were to be established on the basis of the measures of differentiation and integration, the enabling objectives prescribed for the Project were included in questionnaires which were administered to the Project staff, to teachers who had been assisted by the Project staff and to principals of schools associated with the Project. The construction of the instruments--the Environment Interview Schedule, the Differentiation Interview Schedule, the Integration Interview Schedules, and the goal achievement questionnaires for consultants, principals and teachers--is discussed below.

THE ENVIRONMENT INTERVIEW SCHEDULE

Lawrence and Lorsch (1967a) obtained a measure of "environmental certainty" by asking questions relating to "clarity of information", "uncertainty of causal relationships" and "time span of definitive feedback."

For "clarity of information" they asked respondents to:

Please circle the point on the scale provided which most nearly describes the degree to which present job requirements in each functional department are clearly stated or known in your company for the:

Research Department

Job requirements are
very clear in most
instances

1 2 3 4 5 6 7

(Lawrence and Lorsch, 1967a:249)

Job requirements are
not at all clear in
most instances

This question was also asked for the Manufacturing Department and for the Marketing Department.

Lawrence and Lorsch asked respondents to indicate strength of feeling on a seven point scale. In this study, except for those questions taken directly from Lawrence and Lorsch, respondents were asked to estimate the strength of their opinion about each question by placing a cross through the appropriate numeral, and were informed that numerals indicated strength of feeling as: 1. Very low or not at all; 2. Low; 3. Moderate; 4. High; 5. Very high.¹

Within the Project organization there were no subsections but there were three major segments in the environment: the Board segment of the environment; the school segment of the environment and the outside agency segment of the environment. Three similar but separate questions based on this question asked by Lawrence and Lorsch had to be designed to obtain a measure for each segment.

¹ Permission to use the instruments reported in the methodological appendix to the book Organization and Environment by P.R. Lawrence and J.W. Lorsch was kindly granted by Dr. J.W. Lorsch. (The letter giving permission is shown as Appendix B.)

In some cases, questions designed by Lawrence and Lorsch have not been used in their original form. Changes have been made to meet the particular requirements of this study and for no other reason. The use of the original questions as models is acknowledged.

Clarity of Information

The questions which were designed to measure "clarity of information" for each segment were:

Board segment. "Have the duties which you are expected to carry out in relation to the Regional School Board been made clear to you?"

School segment. "How clear are you as far as what is expected of you in relation to schools and students?"

Outside agencies. "How clear are you as far as what is expected of you in relation to outside agencies?"

Uncertainty of Causal Relationships

To obtain a measure of "uncertainty of causal relationships" Lawrence and Lorsch (1967a:249) asked respondents to:

Please circle the point on the scale provided which most nearly describes the degree of difficulty each functional department has in accomplishing its assigned job, given the limitation of the technical and economic resources which are available to it.

With this question as a model, questions were designed to measure "uncertainty of causal relationships." The questions were:

Board segment. "What degree of difficulty do you experience from Board Members when you endeavor to introduce a program?"

School segment. "How difficult is it for you to develop a remedial program for a child which is readily accepted by a teacher?"

Outside agencies. "How difficult is it for you to utilize the recommendations made by an outside agency in a remedial program you develop for a child? (Consider time spent waiting for a report as

part of the difficulty.)"

Time Span of Definitive Feedback

To measure "time span of definitive feedback," Lawrence and Lorsch (1967a:250) asked respondents to:

Please check the alternative which most nearly describes the typical length of time involved before feedback is available to each functional area concerning the success of its job performance

. . .

Research Department

- | | |
|-------|-------------------------|
| _____ | (1) one day |
| _____ | (2) one week |
| _____ | (3) one month |
| _____ | (4) six months |
| _____ | (5) one year |
| _____ | (6) three years or more |

Lawrence and Lorsch asked the same question with the same time-span alternatives of the Manufacturing Department and the Marketing Department.

The Lawrence and Lorsch question was used as a model for the three questions constructed to measure "time span of definitive feedback" in the three segments. The time span alternatives were varied according to the least possible time feedback would take to reach a consultant. For example, within the Board segment and the outside agency segment, one week was considered to be the minimum time it would take information to reach a consultant, but in the school segment where a follow-up visit was made after three weeks, three weeks was considered to be the minimum time it would take feedback to reach a consultant. The questions developed for each segment were:

Board segment. "If you have a question which requires Board consideration, for what length of time do you usually wait for an answer?"

School segment. "What is the typical length of time you wait before you receive feedback from a teacher informing you of the success of a remedial program you have suggested?"

Outside agencies. "What is the typical length of time you wait before a report is available from an outside agency on a child you have referred to that agency?"

Five of the environmental variables discussed by Miklos (1970:8) were used as the basis for questions designed to give a broader picture of each segment. The variables and the questions relating to them are presented below:

Scope

"1. Scope: number of units in relevant environment and geographical dispersion."

Board segment. As there was only the one board controlling the Project this variable was not considered relevant to the board segment.

School segment. "For approximately how many teachers have you provided assistance this year?"

Outside agencies. "How many referrals have you made to outside agencies or to one of the other specialists?" The speech therapist and the school psychologist were included in the count with the outside agencies as referrals to these two specialists had they not been on staff, would have gone to outside agencies.

Diffuseness

"2. Diffuseness or specificity of environmental interest."

Board segment. This variable was not considered relevant as Project staff members, had the occasion arisen, would have referred any questions from boards in other Zones to the Project Director.

School segment. "Apart from those teachers with whom you have worked directly, how many requests (from other teachers, principals, parents) have you had for assistance or information?"

Outside agencies. "How many additional children would you like to have referred to outside agencies?"

The difference between "scope" and "diffuseness" may appear to be marginal but the questions were believed to give different measures. The "scope" question measured the number of teachers assisted and the number of children referred to outside agencies, whereas the "diffuseness" question looked at the number of requests for assistance from teachers and the number of referrals wanted to be made to outside agencies which were handled or could have been handled by the Project staff. These requests and desired referrals were in addition to those counted in the "scope" question.

Supportiveness

"4. Supportiveness of the environment."

Board segment. "How many direct or relayed criticisms (except those relating to the limited time spent with teachers and the limited number of children seen) have you heard about the Project from Board Members?"

School segment. "How many such criticisms have you heard from principals and teachers?"

Outside agencies. "How many direct or relayed criticisms have you heard from outside agencies about the fact that they are involved with the Project?"

Complaints concerning the time that consultants were able to spend with teachers or concerning the number of children assisted were not included as the breadth of the Project and the resources available permitted consultants only a limited time to be spent in each school.

Pressure

"5. Pressure from the environment."

Board segment. "To what degree do Board Members endeavor to influence your mode of operation?"

School segment. "To what degree do principals and teachers endeavor to influence your mode of operation?"

Outside agencies. "To what degree do outside agencies endeavor to influence your mode of operation?"

The degree to which influence was exerted on Project staff was believed to give a measure of environmental pressure.

Certainty

"6. Certainty and predictability of environmental conditions."

Board segment. "How frequently do you have to change your daily/weekly plan because of unpredictable events generated by Board Members?"

School segment. "How frequently do you have to change your daily/weekly plan because of unpredictable events generated by principals and/or teachers?"

Outside agencies. "How frequently do you have to change your daily/weekly plan because of unpredictable events generated by outside agencies?"

The frequency with which unpredictable events occurred within the environment was thought to be an indication of the stability of the environment.

The three questions based on those used by Lawrence and Lorsch and the five questions based on the environmental variables discussed by Miklos were combined to form the Environment Interview Schedule. The schedule is given as Appendix C.

THE DIFFERENTIATION INTERVIEW SCHEDULE

The procedure with regard to determining the state of differentiation in this study was different from that used by Lawrence and Lorsch in that there were no separate units with different functions in the Project organization. Any measure of differentiation obtained for the Project organization could not be compared with the degree of differentiation obtained for any other organization.

As there was only one unit within the Project organization the state of differentiation could not vary. This meant that differentiation need not have been examined in this study. The danger in not administering the differentiation instrument was that important information about the Project may have been overlooked.

The Lawrence and Lorsch differentiation instrument allowed a numerical assessment of the state of differentiation to be calculated. A differentiation score was determined for each sub-unit in the organization and these scores compared. Although differences between the states of differentiation existing in sub-units of the Project organization could not be calculated--the Project staff members were not regarded as being sub-units of the organization--theoretical values which represented maximum and minimum states of differentiation could be established for the Project. By comparing the obtained value of the differentiation state of the Project with the theoretical limits, a judgement as to the degree of differentiation existing within the Project could be made.

Three of the variables used by Lawrence and Lorsch (1967a:255-258) to obtain a measure of differentiation were used in this study. These were: "structural characteristics"; "time orientation" and "goal orientation".

Lawrence and Lorsch used six dimensions in their measure of "structural characteristics" but two of them, "average span of control" and "number of levels to a shared superior", were not used in this study as they were constant for all consultants. The other dimensions, "time span of review of departmental performance", "specificity of review of departmental performance", "importance of formal rules" and "specificity of criteria for evaluation of role occupants", were included as differences could have existed among consultants as far as these dimensions were concerned. The questions asked in order to obtain a rating for each dimension were:

1. Time span of review of departmental performance.² "How frequently are reviews of Project performance held?"
2. Specificity of review of departmental performance. "How specific are these reviews of Project performance?"
3. Importance of formal rules. "Are there any formal rules of procedure which you must follow when dealing with Project concerns?"
4. Specificity of criteria for evaluation of role occupants. "How specific are evaluations of your activities?"

When dealing with "time orientation," Lawrence and Lorsch (1967a: 257) asked:

Persons working on different activities are concerned to differing degrees with current and future problems. We are interested learning how your time is divided between activities which will have an immediate effect on company profits and those which are of a longer-range nature. Indicate below what percent of your time is devoted to working on matters which will show up in the division profit and loss statement within each of the periods indicated. Your answers should total 100%

- (a) 1 month or less _____
- (b) 1 month to 1 quarter _____
- (c) 1 quarter to 1 year _____
- (d) 1 year to 5 years _____

Observations made of the Project staff had suggested that they may have had different orientations toward achieving results within a particular time but, as this was only a supposition, the Lawrence and Lorsch question was used as a model for a question to be included in the differentiation schedule.

² The inclusion of the four alternatives in the form used by Lawrence and Lorsch (1967a:256) is acknowledged. The only changes made were that the alternatives "every two weeks" and "weekly" were substituted for the alternatives "weekly" and "daily" used by Lawrence and Lorsch for the "time span of review of departmental performance" dimension. Daily reviews of Project staff performance were not feasible as four of the consultants were with the Project Director on only one day each week.

The question designed was:

"Setting aside the long-term objectives of the Project of improving the learning abilities of children and the development of teacher skills of recognizing and assisting learning disabled children, what percentage of your time is devoted to activities (testing, teacher assistance, program preparation, collection of resource materials, in-service work, etc.) the results of which will be evident within:

1 day to 1 week _____

1 week to 2 weeks _____

2 weeks to 1 month _____

1 month to 2 months _____

2 months to 6 months _____

6 months or longer _____

100%"

By asking respondents to select the three items of most concern and then the three items of next greatest concern from a list of ten items relating to different environments, Lawrence and Lorsch were able to obtain a measure of "goal orientation." A similar question was used in this study. Consultants were asked to rank in order of importance ten of the goals selected from all of the goals presented for the Project. The question was worded as follows:

"The following goal statements are based on some of the terminal objectives prescribed for the Project. Please rank these goals in order of importance. (Assign a rank of 1 to the most important goal)

Rank

_____ To establish in conjunction with outside agencies a central or common information filing system on disabled learners.

_____ Extend the ability of the teacher to implement activities related to diagnosis, prescription and remediation of learning disabilities.

_____ Improve the reading and arithmetic skills of the child.

_____ Put into effect policies established by the Board.

_____ Bring children with particular learning disabilities to the knowledge of those outside agencies who can help.

_____ Increase the teacher's knowledge about handicaps to learning in children.

_____ Work with outside agencies in preparing programs for learning disabled children.

_____ Reduce the incidence of deviant behavior in pupils.

_____ Establishment of a routine for Project staff for assisting teachers of disabled learners.

_____ Dissemination of information about Project goals and policies and the nature of the support service."

The questions designed to give an indication of "structural characteristics," "time orientation" and "goal orientation" were used to form the differentiation interview schedule. This schedule is given as Appendix D.

THE INTEGRATION INTERVIEW SCHEDULES

A departure from the Lawrence and Lorsch technique was made in the design of the integration interview schedules. The integration concept provided by Lawrence and Lorsch was employed in this study but the questions designed were based on the review of the literature on conflict.

The interview schedules were constructed so that consultants were able to state how they would resolve conflict in each situation. From the responses of consultants the method of conflict resolution employed could then be identified.

Schedules were developed for each segment of the environment and respondents were asked to indicate on a five point scale varying from "very rarely" to "very frequently" the frequency with which each type of conflict occurred. The questions which were designed are given below.

Bargaining Conflict

Conflict resulting from the demand for scarce resources.

Board segment. "Board Members ask you to spend more of your time in their schools and/or to supply more materials."

School segment. "Principals and/or teachers ask you for more of your time and/or for more materials."

Outside agencies. "You experience difficulty in getting outside agencies to see pupils because of other commitments these agencies have."

Bureaucratic Conflict

Conflict arising from situations occurring within a bureaucracy.

Board segment. "Board Members give directives or rulings as to actions to be taken or procedures to be followed when assisting teachers or pupils."

School segment. "Principals give directives or rulings as to actions to be taken or procedures to be followed in their schools."

Outside agencies. "You experience difficulty in getting outside agencies to see pupils and to supply reports because of the rules and procedures these agencies have."

Systems Conflict

Systems conflict--conflict arising from the interaction of people who are at the same level in a system. In order to be able to use this dimension in the interview schedule, and for no other purpose, teachers and personnel in outside agencies were considered to be at the same level as consultants.³

Board segment. No question regarding systems conflict was constructed for the Board-Project integration interview schedule.

School segment. "Teachers are not in agreement with the procedures you suggest or do not carry out a program in the manner which you recommend."

Outside agencies. "Outside agencies do not carry out the tests which you request and/or carry out other tests which you do not require."

Values and Beliefs

Conflict arising because people have different values and beliefs.

Board segment. "The Board establishes policies which are based on values and beliefs to which you do not fully subscribe."

School segment. "Principals and/or teachers, because they appear to hold different values and beliefs, have established a priority of educational goals which is not in accordance with the educational goals

³ Teachers and outside agency personnel have been considered to be at the same level as consultants for the convenience of this aspect of the study. The comparison is not intended for use at any other time or in any other context.

of the Project. This prevents them from accepting the program which you recommend."

Outside agencies. "Outside agencies appear to have goals which they place before the needs of the pupils you refer to them."

Authority

Conflict arising over questions of who has authority in a particular situation.

Board segment. "An open or felt difference of opinion with Board Members over who should direct the Project in schools."

School segment. "You believe that a teacher shows some hesitancy in accepting a program which you recommend because the teacher believes that he has the right to conduct his class in any way that he pleases."

Outside agencies. "You believe that an outside agency shows some hesitancy in carrying out the testing you request because the outside agency considers that it has the right to select the tests it will give and the time at which it will give them."

Role or Status Ambiguity

Conflict arising among those interacting because one group or individual is uncertain of the role and/or status of the other group or individual.

Board segment. This aspect was not considered to be relevant to the Board segment as the Board Members and the Project staff were aware of the role and status of each other.

School segment. "You believe that a teacher does not accept your advice readily because he is uncertain of your role and your status within the school system."

Outside agencies. "You believe that outside agencies do not comply readily with requests because they are uncertain of your role and your status in relation to them."

Psychological Conflict

Conflict arising from difficulties in communicating with another group or individual because of personality differences.

Board segment. This dimension was not included in the Board-Project interview schedule as Board Members directed their communications to consultants through the Project Director.

School segment. "You experience difficulty in communicating with a teacher because of what you believe are personality differences or other barriers which might be termed 'psychological'."

Outside agencies. "You experience difficulty in communicating with an outside agency because of what you believe are personality differences or other barriers which might be termed 'psychological'."

Formalization

Conflict arising from differences in task expectations.

Board segment. "You encounter or learn of Board Members who have different task expectations for you from those that you believe are associated with your role--e.g., they expect you to carry out the

remedial work with the child rather than to design a remedial program for teachers to follow."

School segment. "You assist teachers who have different task expectations for you from those which you believe to be associated with your role--e.g., they expect you to carry out remedial work with the child rather than to give them a program which they are to follow."

Outside agencies. "You meet outside agencies who have different task expectations for you from those which you believe to be associated with your role--e.g., an outside agency believes that you should carry out the testing you have asked the agency to do."

Respondents were asked to estimate the frequency with which the above situations might occur. The situations were believed to represent a source of conflict which had been encountered in the review of literature on conflict. To complete each interview schedule two other questions which were not based on the literature review were asked. These were: "What sort of a relationship do you believe exists generally between the Project staff and the Board?" and "What suggestions can you give which, if implemented, might lead to an improvement in the working relations between Project staff and the Board?" The same questions were asked for schools and for outside agencies.

The statements and the questions were used to form a "Board-Project" interview schedule, a "School-Project" interview schedule and an "Outside Agency-Project" interview schedule. The three schedules are shown as Appendices E, F, and G respectively.

EFFECTIVENESS

In Chapter 2, the decision to accept the degree to which goals were achieved as the criterion of effectiveness was explained. The construction of effectiveness measures was simplified by the fact that a number of goal statements had been prescribed for the Project. Questionnaires designed to measure effectiveness were constructed by taking enabling objectives and restating them as questions. Enabling objectives were selected so that the areas of: diagnosis and prescription; materials, media and technology; behavior management; and in-service were represented. The enabling objectives used and the questions asked were:

II. Diagnosis and prescription

The LAFS team will provide service and/or assist teachers in

1. using diagnostic instruments that relate to reading and arithmetic skills and in monitoring classroom behavior,
2. identifying and analyzing task/skill hierarchies in the basic skill areas. ("Objectives of the Learning Assistance Field Service," circa 1972:4)

The questions based on these objectives and asked of teachers were:

"To what degree do you believe that you have increased your knowledge of the use of diagnostic instruments that relate to reading and/or arithmetic skills?"

"To what degree do you believe that you have been assisted in the diagnosing and/or monitoring of the classroom behavior of children?"

"To what degree do you believe that you have been assisted in analyzing task/skill hierarchies in the basic skill areas?"

III. Materials, media and technology

The LAFS team will provide service and/or assist teachers in

1. the identification and procurement of instructional materials and media appropriate to individualization of instruction for children identified as learning disabled,

2. the design, application, evaluation, and modification of teaching routines and learning environments appropriate to individualization of instruction in the basic skills. ("Objectives of the Learning Assistance Field Service," circa 1972:4)

The questions based on these objectives and asked of teachers were:

"To what degree have you been directed to or provided with instructional materials and/or media appropriate to the individualization of instruction?"

"To what degree have you been assisted in the design of teaching routines appropriate to the individualization of instruction in the basic skills?"

V. Behavior management

The project team will instruct and assist teachers in . . .

2. the design, implementation and evaluation of programs for modification of deviant behavior.

Emotional and health problems will, when indicated, be referred to other professionals. The diagnoses and recommendations of other professionals may temper and modify the approach outlined. Teachers will be assisted in the follow-up to such assessments. (Discussion Topics for Participating School Systems, circa 1972:2)

The questions based on these statements and included in the teacher questionnaire were:

"To what degree have you been assisted with the design of programs for modification of deviant behavior in children?"

"To what degree have you been assisted by Project staff members with follow-up activities for children with emotional and/or health problems who have been referred to other professionals?"

Inservice

The project team will assist teachers in

1. using diagnostic instruments . . .
4. developing individualized programs . . . (Discussion Topics for Participating School Systems, circa 1972:2)

The questions used in the teacher questionnaire and based on these

objectives were:

"To what degree have you been assisted by in-service programs in diagnosing the educational problems of the pupil?"

"To what degree have you been assisted by in-service programs in constructing and implementing programs designed to correct the educational problems of the pupil?"

A question not based on a Project objective but designed to give information about the operation of the Project was: "To what degree are you in favor of having a group in-service program conducted by all Project staff members in preference to individual assistance from one Project staff member?" This question was prompted by comments made by teachers while the Project was being observed in their schools.

Two questionnaires were constructed--one for teachers and one for principals. The first nine questions in each questionnaire differed only slightly in that teachers were asked, "to what degree have 'you' . . ." whereas principals were asked, "To what degree have 'teachers in your school' . . ." Questions 10 to 17 were not based on goal statements and with the exception of one case where the word "school" was substituted in the questionnaire for principals for the word "classroom" in the teacher questionnaire, the questions used in both questionnaires were identical. Questions 15 to 17 were designed to give respondents an opportunity to comment on aspects of the operation of the Project. Question 10 related to in-service education and has been given above. Questions 11 to 17 are presented below.

"11. To what degree do you think that the Project is helping to meet the needs of learning disabled children in your classroom?"

"12. What is the degree of duplication of services provided

by the Learning Assistance Field Service Project and services provided by other groups?"

"13. To what degree are you in favor of the Project continuing with its present mode of operation in preference to some other mode?"

"14. To what degree do programs designed to assist learning disabled children lose their effectiveness because suitable materials are not available?"

"15. In your opinion, what are the best features of the Project?"

"16. On which aspects of the Project would you like to see Project staff members concentrate their attention?"

"17. Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?"

Respondents were asked to indicate on a five point scale the strength of their opinions about each of the first fourteen questions. Alternatives to indicate strength of feeling ranged from "very low or not at all" to "very high."

A goal achievement questionnaire was also constructed for the Project staff. The seventeen questions in the teacher questionnaire, with some rewording where necessary, were included in the Project staff questionnaire. Questions relating to administration and support services which could not be included in the other questionnaires were constructed from goal statements for these areas. The goal statements and the questions asked were:

- A. Administrative
 1. Development of policies by the Central Alberta Regional School District Board of trustees.
 2. Development of regulations, routines and attention to procedural details by the Director and staff in their board policy.
 3. Communication with referent groups concerning project goals, policies and the nature of the support service. ("Objectives of the Learning Assistance Field Service," circa 1972:4)

The questions which were based on these goal statements were:

"To what degree do you believe that the Board has developed policies which, given the limitations of time, resources and school involvement, Project staff members have been able to implement?"

"To what degree do you believe that Project staff members have been able to develop regulations and routines for the administration of the Project according to Board policy?"

"To what degree do you believe that you have been successful in passing on information about Project goals, policies and the nature of the support service?"

B. Support Services

LAFS personnel and school system personnel will relate to outside agencies and professionals in these ways:

1. Communication
2. Articulation of programs. Duplication is avoided.
3. Establishment of a central or common information filing system.

Questions relating to support services and based on these statements were:

"To what degree are you satisfied with the communication which has existed between you and the outside agencies?"

"In the case of referrals made to outside agencies, to what degree are you satisfied with the service provided?"

"What degree of success has been achieved in the establishing with outside agencies of a central or common information filing system?"

Project staff members were asked a number of other questions relating to the operation of the Project. They were asked how much time they spent on keeping of records, the aspects of Board policy with which they were not in favor, how the operation of the Board could be improved and how better Board-Project understanding could be developed.

Project staff members were also asked what, in their opinion, were the most successful features of the services provided by outside agencies and how the service provided by outside agencies might be improved.

The three questionnaires--the questionnaire for teachers associated with the Learning Assistance Field Service Project, the questionnaire for principals of schools participating in the Learning Assistance Field Service Project and the goal achievement questionnaire for L.A.F.S. specialists--are shown as Appendices H, I and J respectively.

RELIABILITY AND VALIDITY

In experimental research, questions of reliability and validity are vital if confidence is going to be placed in decisions based on data which have been obtained from instruments. Reliability and validity are important also in other forms of research and should not be overlooked. Phillips (1973:86) observes that:

Despite the heavy emphasis on reliability and validity in methodological textbooks, they are seldom given detailed attention in the actual research activities of sociologists. Reliability is occasionally mentioned, but questions of validity are almost completely ignored.

Reliability

An instrument is considered to be reliable if, on separate administrations, it gives results which are consistent. (Phillips 1973:86) When the nature of a study is such that replication of the procedures employed could only be done if the whole undertaking being observed were to be repeated, the problem of establishing reliability becomes very difficult. A test-retest procedure for determining reliability was not considered for this study due to the fact that more and more people were being brought into the Project with the passing

of every day. Again, children who had been given assistance during the early stages of the Project may have been achieving at an ever increasing rate and the opinions of teachers may have tended to change as the school year progressed, therefore the results obtained from a pilot study may not have been comparable with the results obtained from a study carried out at a later date.

Validity

Phillips (1973:86) notes that "validity . . . refers to whether a measure, in fact, measures what it purports to measure." The aspect of validity on which effort was concentrated in regard to the measures described above was whether the questions did in fact deal with the areas with which they were believed to deal. In other words, did the instruments possess content validity?

With certain of the questionnaires and interview schedules content validity appeared to be almost self-evident. For example, the environment interview schedule contained three questions which followed closely three questions used by Lawrence and Lorsch (1967a:249), and the other five questions were based on five variables clearly described by Miklos (1970:8); the differentiation interview schedule contained material actually used by Lawrence and Lorsch (1967a:256) and other questions which were closely modeled on those used by Lawrence and Lorsch (1967a:257); and the questionnaires used to determine effectiveness contained prescribed goal statements restated as questions and open-ended questions which called for opinions.

Content validity was determined by checking and rechecking the questions with the original material over a period of time. An ex-post

test of validity was supplied by the responses to the questionnaires in that the material which was sought was obtained and no questions that could be regarded as relating to validity were raised by respondents.

SUMMARY

This Chapter has discussed the construction of the Environment Interview Schedule, the Differentiation Interview Schedule, the Integration Interview Schedules and the questionnaires administered to consultants, principals and teachers in order to determine effectiveness.

The Environment Interview Schedule was based on three of the questions used by Lawrence and Lorsch to obtain a measure of the diversity of an environment and five variables listed by Miklos as environmental descriptors. The Differentiation Interview Schedule followed closely the instrument Lawrence and Lorsch used to ascertain the state of differentiation existing within an organization. The Integration Interview Schedules contained questions believed to represent eight causes of conflict which had been identified in the review of literature on conflict. The effectiveness measures contained prescribed enabling objectives restated as questions and questions which called for comments.

The Chapter concluded with a note on the importance of reliability and validity in research. The difficulties in establishing reliability and validity in a study of this nature were also mentioned.

Chapter 4 discusses the application of the instruments and the statistical procedures employed.

Chapter 4

RESEARCH PROCEDURES

One part of this study, the section dealing with the attitude change of teachers, was of a pseudo-experimental nature in that a treatment group and a control group were involved, but, in the main, the study was descriptive. If the method of the study were to be categorized, the category of study types into which it might best fit would be that of the case study.

Wrightstone (1969:11) observed that the case study was an acceptable research technique, and Pannu (1972:101) comments:

. . . one of the major strengths of the case study, as an essentially explanatory research, is that it permits, through the use of a variety of sources of data and techniques of data gathering, an in-depth study of an organization.

This Chapter discusses the methods by which data were collected, describes how the instruments were applied and mentions briefly the statistical techniques which were employed.

DATA COLLECTION

Data were collected primarily through the instruments described in Chapter 3 being applied as questionnaires but use was made also of the observation and interview techniques.

Observation

A number of observations of the various facets of the operation of the Project were made. Meetings of the Board from October, 1973, to

June, 1974, were attended where policy making was observed. The solving of technical problems necessary to operationalize the policy decisions made by the Board was observed at meetings held between the Project Director and the Project staff. Project staff members were observed testing children in schools, designing and preparing programs for these children and conducting inservice courses.

Interviews

Using the environment interview schedules mentioned above, interviews were conducted with the Project staff in order to gain descriptions of the three major segments of the environment. The state of differentiation existing within the Project organization and the states of integration existing between the Project and the three environmental segments were also determined from responses made by the Project staff to questions asked in an interview situation.

Questionnaires

Almost all data from which conclusions relating to the effectiveness of the Project were drawn were obtained from responses to questionnaires. Questionnaires were administered to principals, teachers and the Project staff.

The attitude measuring instrument was more of the form of a paper and pencil test rather than a questionnaire but, as it called for respondents to answer questions, it could be placed in the questionnaire category.

APPLICATION OF THE INSTRUMENTS

Interviews were conducted with the Project staff in April and May, 1974. Questionnaires were administered to principals and teachers in May, 1974, and the attitude measuring instrument was administered in November, 1973 and again in May, 1974. More detailed information relating to the administration of each instrument is given below.

ENVIRONMENT INTERVIEW SCHEDULE, DIFFERENTIATION INTERVIEW SCHEDULE AND INTEGRATION INTERVIEW SCHEDULES

The Environment Interview Schedule, Differentiation Interview Schedule and the Integration Interview Schedules were administered to the Project staff either as interview schedules or as questionnaires. All eight Project staff members completed the instruments.

Goal Achievement Questionnaire for L.A.F.S. Project Staff

Project staff members completed the Goal Achievement Questionnaire in May, 1974.

Questions for Principals

The names of all schools participating in the Project were obtained from the Learning Assistance Field Service Project Office. Letters were written to the principals of approximately 78 of these schools asking them to assist in the study by answering the principal questionnaire. An example of the letter is given as Appendix K. Letters were mailed in April, 1974 with the request that principals return the completed questionnaire by May 8, 1974.

Questions for Teachers

The names of teachers in each school participating in the Project were obtained from the Learning Assistance Field Service Office and a list of names compiled. Project staff members were given the list and asked to identify the names of teachers who had received assistance through the Project.

A letter was sent to a sample of approximately 140 of the teachers identified by the Project staff as having received assistance asking them to complete the teacher questionnaire. Those teachers who were identified by the Project staff but who had been included in the attitude measuring study were not asked to complete the questionnaire. Participating in two studies was thought to make too much of a demand on the time of any teacher. The letter was mailed to teachers at the same time as the letter sent to principals. Teachers were also requested to return the completed questionnaire by May 8, 1974. A copy of the letter is shown as Appendix L.

Attitude Measuring Instrument

The section of the study which dealt with the change in attitude shown by teachers associated with the Project toward learning disabled children and projects similar to the Learning Assistance Field Service Project is discussed in detail in Chapter 8.

The attitude study was in three parts. These parts were: a pilot study to assist in the design of the instrument used to measure attitude change; the administration of the instrument early in the school year; and a repeat administration of the instrument late in the school year.

The pilot study. To assist in the development of the instrument designed to measure attitude change a pilot study was conducted in September, 1973. Twenty students enrolled in an Education course at The University of Alberta were asked to complete the trial instrument.

The first administration. From the list of names of teachers in schools participating in the Project the names of 130 teachers were selected at random. In November, 1973, letters were sent to these teachers asking for their assistance in the study of attitude change by completing the Attitude Measuring Instrument. Copies of the letter and the instrument are given as Appendices M and N respectively. Teachers were asked to return the completed instrument by early December, 1973.

Sixty students enrolled in Education courses at The University of Alberta were asked to complete the instrument at the same time as the group of teachers associated with the Project.

The second administration. Letters were sent to both groups of teachers in April, 1974, asking them to complete the instrument a second time and to return it by May 8, 1974. Copies of the letters are shown as Appendix O.

STATISTICAL TECHNIQUES

Statistical techniques were applied to the responses made by the Project staff, principals and teachers mainly to show the differences existing among the various groups. Whenever possible, means and standard deviations were calculated. Tests for significant differences were conducted for all means computed for samples.

On two occasions, a Kendall's coefficient of concordance, W , was calculated to indicate the extent to which groups agreed to the order in which items should be ranked.

Factor analysis was applied to the responses of the group participating in the pilot study of the attitude measuring survey.

SUMMARY

This Chapter has explained how data for the study were collected almost entirely through the application of questionnaires but noted that the interview and observation techniques were also employed. The administration of the instruments was discussed and mention was made of the statistical treatments applied to the data obtained from the instruments.

Chapter 5 contains the findings from the application of the Environment Interview Schedule, the Differentiation Interview Schedule and the Integration Interview Schedules.

Chapter 5

ENVIRONMENTAL DIVERSITY AND PROJECT DIFFERENTIATION AND INTEGRATION

This Chapter discusses the diversity of the major segments of the environment, the state of differentiation that existed within the Project organization, and the states of integration that existed between the Project and each of its environmental segments.

DIVERSITY OF THE ENVIRONMENTS

The Learning Assistance Field Service Project was seen as operating in three major segments of the environment--the Board segment, the school segment and the outside agency segment. A measure of the diversity of the three segments was believed to be obtainable from responses given by Project staff to an Environment Interview Schedule. The Environment Interview Schedule contained three questions based on those used by Lawrence and Lorsch (1967a) to obtain measures of what they termed, "clarity of information," "uncertainty of causal relationships" and "time span of definitive feedback," and five questions based on environmental descriptors mentioned by Miklos (1972). The Environment Interview Schedule was used as an interview schedule with some Project staff members but, for convenience of administration, was printed and used as a questionnaire with other Project staff members.

In the Environment Interview Schedule the ratings assigned to each question dealing with the diversity of each environmental segment

ranged from 1 to 5. The maximum and minimum values which could have been obtained for the mean of each question were 5.00 and 1.00 respectively. The ratings were ordered so that the greater the value of the mean the more diverse the environment. The means which were calculated have use only in that they allow comparisons to be made among segments of the environment. The means were not intended for use in any other manner.

Table 2 gives the means the Project staff assigned to each question in each environmental segment. Means for various combinations of questions are also given.

Clarity of Information

Question 1 asked, "Have the duties which you are expected to carry out in relation to the Central Alberta Board/school and students/outside agencies been made clear to you?" The mean response for the Board segment was higher than the mean for the outside agency segment and considerably higher than the mean for the school segment. This indicated that Project staff members were not as certain of their responsibilities in the Board segment of the environment as they were in the other two segments.

Information obtained from earlier interviews with Project staff and from observations of the Project in operation had suggested that while the duties to be performed for schools were clearly stated, the Project staff had no specific duties to be performed solely for the Board. The duties carried out for the Board were those which were carried out in schools. Where schools and students were concerned, the Project staff considered themselves to be clear as far as knowing what was expected of them. They were more certain of what their responsibilities were in the school situation than in either of the other

Table 2

Means Obtained by the Project Staff for Each
Question in Each Environmental Segment

Questions	Means for each environmental segment		
	Board	School	Outside Agency
1. Clarity of information	2.86	2.00	2.71
2. Uncertainty of causal relationships	1.29	2.43	2.71
3. Time span of definitive feedback	2.71	2.71	2.71
4. Scope ¹	--	4.57	4.14
5. Diffuseness ¹	--	2.71	1.14
6. Supportiveness of the environment	1.57	1.00	1.00
7. Pressure from the environment	1.29	2.57	1.14
8. Certainty of environmental conditions	1.14	2.14	1.29
Questions 1, 2 and 3	2.29	2.38	2.71
Questions 4 to 8	1.33	2.60	1.74
Questions 6 to 8	1.33	1.90	1.14
Questions 1 to 3 and 6 to 8	1.80	2.14	1.93
Questions 1 to 8	1.80	2.52	1.98

¹ Questions on "scope" and "diffuseness" in the Board segment were not included in the Environment Interview Schedule.

two environmental segments.

Project staff members indicated that they were almost as uncertain of their responsibilities in the outside agency segment of the environment as they were in the Board segment. This may have been because duties which Project staff members were expected to carry out in relation to outside agencies were not prescribed by the Board. The range of functions performed by the outside agencies with which a staff member might make contact would have made the task of the Board in prescribing duties very difficult.

Uncertainty of Causal Relationships

Project staff members were asked to report the degree of difficulty they encountered from Board Members when introducing a program. In all but one case, Project staff members reported experiencing no difficulties, but they also reported having little or no contact with Board Members. Superintendents of some participating systems represented their systems on the Regional Board and were therefore Board Members. Project staff members saw the contact they had with these particular people as being contact with a superintendent rather than as contact with a Board Member.

Project staff members reported a degree of difficulty in developing a remedial program for a child which was readily accepted by a teacher. The value of the average rating assigned was almost twice that assigned to the degree of difficulty Project staff members reported experiencing from Board Members.

Project staff members reported that while there was no difficulty in utilizing the information contained in reports supplied

by outside agencies the time spent in waiting for the reports was a handicap. One staff member reported difficulty initially in gaining access to reports.

Time Span of Definitive Feedback

Generally, the Project staff had no contact with the Board other than through the Director. Questions put to the Director by the Project staff were answered immediately but those questions requiring Board consideration could not be discussed until the Board met. By regulation, the Board was scheduled to meet quarterly therefore any questions which required Board consideration, if put immediately following a Board meeting, would have to wait until the next meeting of the Board before it could be answered. Most Project staff members had their questions answered immediately but a few reported a delay before answers were obtained.

A median time of almost five weeks was reported by Project staff as the length of time waited before feedback relating to the success of a recommended program was received from teachers. The minimum time Project staff members were expected to have had to wait for feedback was three weeks as observation had shown that, on the average, they made follow-up visits every three weeks. From the responses to this question, the second follow-up visit appeared to be the time when definitive feedback was obtained.

Project staff members varied in the time for which they waited for reports from outside agencies. Some staff members waited for less than a week while others waited for more than five weeks.

Of the three environmental segments, the outside agency segment was

the most diverse as judged by the responses to the questions based on those used by Lawrence and Lorsch.

Scope

The scope variable did not apply to the Board segment of the environment as the membership of the Board could increase only if new school systems joined the Project. Scope and diffuseness were considered to be unlikely to vary in the Board segment and therefore no attempt was made to measure either variable.

In the school situation scope was interpreted as the number of teachers for whom a Project staff member was likely to provide assistance. Observations had revealed that some staff members were implementing the Project in schools in manners which differed from those manners used by other staff members. Depending on the technique employed, a staff member could provide direct assistance for a few teachers or for many. The fact that the median number of teachers assisted was in excess of 100 was an indication of the broad scope of the Project and also of its extent.

A measure of scope in the outside agency segment was obtained by asking the Project staff to give the number of referrals they had made to outside agencies or to one of the other specialists. Even though some staff members reported that they considered the contacting of outside agencies to be the responsibility of the school, the median response was in excess of 12 referrals.

Diffuseness

Scope had been defined as the number of teachers for whom direct assistance had been provided. Diffuseness was considered to be the

interest shown in the Project by teachers who were not receiving assistance and by other people who had no contact, through a child, for example, with the Project staff. Project staff members reported that many teachers not associated with the Project asked for assistance during recess and lunch breaks and that after school hours parents often sought information. The responses to the Environment Interview Schedule indicated that, on the average, each staff member provided assistance for an additional 30 people. The tightness of the schedules of the Project staff would have meant that these additional requests for assistance had to be met in off-duty hours. Had it not been for the limited time each staff member could spend in a school, the number of additional requests for assistance may have been much greater.

In very general terms, the responses could be said to show that Project staff members were providing assistance for approximately one-third as many people again as the number of people they were supposed to assist. Even if the assistance provided was not as extensive as that provided for those teachers who were in direct association with the Project, these additional requests serve to illustrate a demand made by the environment for which no provision could be made with the resources available to the Project.

With one exception, staff members chose the lowest category offered when asked to indicate the number of additional referrals they would have liked to have made to outside agencies. Although these responses pointed to the environment not being diffuse it may in fact have been much more diffuse. If staff members believe the contacting of outside agencies to be the duty of the school it is probable that they will be more concerned with other aspects of the Project rather

than with referring pupils to outside agencies.

Supportiveness of the Environment

An indication of the supportiveness of the environment was believed to be obtainable from answers given by the Project staff to the question, "How many direct or relayed criticisms have you heard about the Project from Board Members?" In all but one case, Project staff reported having heard few if any criticisms of the Project from Board Members. One reason for this was the fact that the Project staff rarely met with Members of the Board but, on the other hand, the argument could be presented that if a Board Member had a criticism of the Project he could have made it known at a Board meeting and have had it relayed to any Project staff member by the Director.

Having a lack of criticism does not necessarily imply that the environment provided support for the Project, but, for the purpose of this study, the tentative assumption was made that supportiveness would vary according to the number of criticisms made.

Without exception, the Project staff indicated that the number of criticisms heard from principals and teachers was 10 or less, the lowest category offered on the Environment Interview Schedule. The fact that the Project staff reported having heard very few criticisms from school personnel was an indication that they saw the school segment of the environment as being highly supportive.

The lowest possible score was recorded for this question when it applied to the outside agency segment of the environment. If outside agencies had any complaints about being involved in the Project they had not voiced them to staff members.

Pressure from the Environment

Project staff members were asked to indicate the degree to which Board Members endeavored to influence the mode of operation of the Project. Only one Project staff member reported encountering any attempt to influence his mode of operation. The Board segment was deemed, therefore, not to be exerting pressure.

Pressure in the school segment was defined as principals and teachers endeavoring to influence the mode of operation employed by staff members. Project staff reported twice as much pressure in the school than that existing in either of the other two segments.

All but one Project staff member reported no interference from outside agencies.

Certainty of Environmental Conditions

The Board segment was found to be particularly stable. But for one instance, Project staff members indicated that they "very rarely" had to change their daily/weekly plan because Board Members had generated unpredictable events.

The least stable segment according to the responses of the Project staff was the school segment. Even though Project staff members reported that it was only "rarely" on the average that they had to change their daily/weekly plan because of unpredictable events generated by principals and/or teachers, the mean was much higher than the mean recorded for either of the other two segments.

The staff member who reported attempts by outside agencies to influence his mode of operation was the only staff member to report having to change his daily/weekly plan of activities because of

unpredictable events generated by outside agencies.

Comparative Diversity of Environmental Segments

The conclusion drawn after studying the means of the responses for all concepts in each environment was that the school segment was considerably more diverse than that of the other two segments and that the outside agency segment was slightly more diverse than the Board segment.

Observations made of the Project during its first year of operation had indicated that the Board segment and the outside agency segment were similar in that they made very few demands on the Project staff. The responses given by the Project staff to the Environment Interview Schedule confirmed the findings obtained from observations.

Informal conversations held with Project staff members and observations conducted in schools had given rise to the belief that the school segment was particularly diverse. This belief was confirmed by the responses to the questions on the Environment Interview Schedule.

A number of factors were found to contribute to the diversity of the school segment. The geographical distribution of the schools associated with the Project was extensive as was shown in Figure 2. From the point of view of location and number of entities to be seen, the school segment was much more diverse.

Schools ranged in size from very small to large and although no attempt was made to determine the volume of materials and resources available in each school the probability exists that some schools were better equipped than other schools and found it easier to release teachers from their classes in order to plan programs and discuss pupils

with the Project staff. A school poor in resource materials may have made extensive demands on the Project. Schools in widely spaced localities may also have exhibited regional differences which could have caused a different pattern of demand for services.

The capabilities, experience and interest of the teachers involved plus their acceptance of the assistance offered would have placed varying demands on the Project staff. These demands, if they were to be met adequately, may have required a high degree of resourcefulness on the part of Project staff members. The demands for assistance made by teachers not a part of the Project may have compounded the state of diversity for which teachers were responsible.

Further diversification could be seen to be attributable to the interest and support shown by parents. Parents eager for assistance from a Project staff member could normally not be seen during school hours. Other parents whom the Project staff wished to meet in order to learn more of a child's background may have had employment commitments and been available only in an evening.

The greatest variety of demands would have been made by children. Any child not achieving at a prescribed rate may have been considered to be learning disabled. The number of reasons why a child may not have been maintaining an acceptable rate of progress could be very large.

When combinations of the factors associated with the geographical extent of the Project and with principals, teachers, parents and pupils, are seen as being feasible occurrences, the school environment becomes enormously diverse.

DIFFERENTIATION

Unlike the Lawrence and Lorsch (1967) study and studies by Derr (1971) and by Gabarro (1972), this study dealt with a single unit organization. The Lawrence and Lorsch model has been used in the study of organizations which were more complex and where it was possible for different states of differentiation to exist among the various sub-units of the organization. The Project could be said to have sub-units if each staff member were to be considered as a sub-unit, but these sub-units did not compete for resources and, to a degree, could have acted as non-related entities.

Differentiation could not be employed in this study as it was used by Lawrence and Lorsch. Nevertheless, an investigation of the state of differentiation existing within the Project organization was considered to be of value in that it gave more information about the Project and supplied support for impressions gained from observations. Treatments applied to the raw data by Lawrence and Lorsch were also not applicable to this study but, for purposes of comparability with theoretical limits, some mathematical analyses of the response data have been conducted.

The construction of the Differentiation Questionnaire was discussed in Chapter 3. The four questions included in the Differentiation Questionnaire to measure "structural characteristics" were selected from the six questions used by Lawrence and Lorsch (1967a:256) to measure this aspect. Changes in the wording were made but the questions designed by Lawrence and Lorsch are acknowledged as the source of the questions in the Differentiation Questionnaire. The questions designed

to measure "time orientation" and "goal orientation" were also based on those used by Lawrence and Lorsch.

Project staff members were asked to complete the Differentiation Questionnaire at the same time that they were asked to complete the Environment Interview Schedule.

Structural Characteristics

Two questions used by Lawrence and Lorsch which measured "average span of control" and "number of levels to a shared supervisor" were not included in the measure of "structural characteristics" as these aspects were common to the organization.

When dealing with structural characteristics, Lawrence and Lorsch (1967a:256) stated that, "a structural score was computed for each department in all organizations by adding scores on all six characteristics." Although there was only one "department" and only four "characteristics" a structural score was computed for the Project organization from the responses of the Project staff. This score is given in Table 3.

Table 3
Scores for Structural Characteristics

Characteristic	Summed response value
Time span of review of performance	13
Specificity of review of performance	11
Importance of formal rules	10
Specificity of criteria for evaluation	12
Structural score	46

Time span of review of performance. The theoretical limits to the scores which could have been obtained by Project staff members on this variable were 7--denoting a very low degree of differentiation, and 28--denoting the maximum degree of differentiation. The Project staff assigned a score of 13 to the variable thereby showing that from the point of view of time span of review of performance the Project organization was not highly differentiated.

Specificity of review of performance. Responses from Project staff members varied from "general oral review" to having to supply "one or more general statistics." The average response suggested that reviews of Project performance were not specific.

Importance of formal rules. Project staff members were of the opinion that there were "no rules" or, at most, "rules on minor routine procedures."

Specificity of criteria for evaluation. Most Project staff members reported that there was no formal evaluation. The average response suggested that as far as this variable was concerned the Project organization was not highly differentiated.

Structural score. A structural score was obtained by summing all responses. In theory, a score could range from 28 to 112. The structural score of 46 which was obtained does not indicate that the Project was not sufficiently differentiated to meet the demands made by the environment. For the purposes of this study the computation of a structural score was of value in that an examination was made of the characteristics of which it is comprised.

Time Orientation

Project staff members were asked to indicate the percentage of their time which was devoted to activities the results of which would be evident within periods of time ranging from one week or less to six months or more. A summary of their responses is shown in Table 4.

Table 4

Percentages of Project Staff Members' Time Devoted
to Activities with Short-term and
Long-term Results

Time Span	Percentages of total time spent on this time span
1 day to 1 week	3.3
1 week to 2 weeks	10.0
2 weeks to 1 month	21.7
1 month to 2 months	26.7
2 months to 6 months	31.7
6 months or longer	6.6

If an arbitrary division were made so that activities for which results were expected within one month were declared short-term and all other activities were declared long-term, Table 4 shows that approximately only one-third of the time of Project staff members was taken up with activities the results of which would be known within one month.

Goal Orientation

Lawrence and Lorsch (1967a:257) listed ten criteria and asked respondents to:

- (a) Place a "1" by the three criteria which are of most concern to you personally.
- (b) Place a "2" by the "next three criteria" which are of

second most concern to you personally.

This procedure was not followed with Project staff members as they were asked to rank ten goals selected from the objectives prescribed for the Project.

To find the amount of agreement about Project goals among the staff, a statistical technique known as Kendall's coefficient of concordance, W , was used. The coefficient of concordance is designed to show agreement among rankers of items. A W value of 1.0 indicates perfect agreement while a value of 0.3, for example, would denote very little agreement among the rankers.

The determination of the W value is shown in Appendix P. A value of 0.85 for W reflects a high degree of agreement among the Project staff as to the order of importance of the goals. As Project staff members showed a similar orientation toward goals they could not be said to be highly differentiated with respect to this variable.

Project Differentiation

As there was no other organizations or sub-units with which to compare the Project organization, comparisons had to be restricted to the theoretical limits of the measurement scales.

Lawrence and Lorsch (1967a:258), as part of the explanation of the mathematical analysis to which they subjected their differentiation data, stated:

To determine the relative degree of differentiation between pairs of units or among organizations it was necessary to develop a comparable differentiation score for all . . . attributes, i.e., structure and . . . time and goal orientations. This was done as follows. First, the differences in each attribute for all ten organizations were divided into five classes. Each class was next assigned a "differentiation score" from one (least differentiated class) to five (most differentiated class). These five point units

of differentiation scores for each attribute made it possible to arrive at a rough measure of the relative total differentiation between relevant units by summing the scores for all . . . attributes.

An explanation of the manner in which the responses to each section of the Differentiation Questionnaire were treated is presented below.

Structural characteristics. The theoretical limits to the structural score were from 28 to 112.¹ Following the procedure of Lawrence and Lorsch, the scores were separated into five classes. The classes were: class one--scores from 28 to 44; class two--scores from 45 to 61; class three--scores from 62 to 78; class four--scores from 79 to 95; and class five--scores from 96 to 112. Each class was assigned a differentiation score. The scores ranged from 1 for class one to 5 for class five.

The obtained structural score of 46 fell within class two. Therefore, a differentiation score of 2 was assigned to structural characteristics.

Time orientation. If Project staff members were to assign an equal percentage of their time to each goal period they would allocate 16.7 percent to each. If a Project staff member were to devote all of his time to one goal period, his maximum absolute variation from the position where he allocated his time equally to all goal periods

¹ A Project staff member, by choosing the lowest category offered, could obtain a minimum score of 4. The maximum score he could obtain was 16. As there were seven respondents the minimum total score was $7 \times 4 = 28$, and the maximum score was $7 \times 16 = 112$.

would be 166.8 percent.²

As six Project staff members completed this section of the Differentiation Questionnaire the range of variation scores was from 0.0 percent to 1,000.8 percent. Dividing this range into five classes in order that differentiation scores might be tabulated gave: class one--from 0 percent to 200 percent; class two--from 201 percent to 400 percent; class three--from 401 percent to 600 percent; class four--from 601 percent to 800 percent; and class five--from 801 percent to 1000.8 percent.

The percentages of time allocated by each Project staff member to each goal period were compared with the theoretical response of allocating time equally to each goal period and an absolute difference value for each staff member computed. The summed absolute difference value for all consultants was found to be 759.8. A time orientation score of 759.8 fell into class four and was therefore equated with a differentiation score of 4. A differentiation score of 4 enabled the Project organization to be classified as highly differentiated with regard to time orientation.

Goal orientation. Five classes were created for goal orientation by dividing Kendall's W values into classes. The classes were arranged from high differentiation to low differentiation as: class one--from 1.00 to 0.81; class two--from 0.80 to 0.61; class three--from 0.60 to 0.41; class four--from 0.40 to 0.21; and class five--from 0.20 to 0.00. The obtained W value of 0.85 was equated with a differentiation score of 1.

² By devoting 100 percent of his time to one of the six goal periods he would not be able to spend time on any of the other five goal periods. His variation in terms of percentage time would be $(16.7\%-100\%) + (16.7\%-0\%) + (16.7\%-0\%) + (16.7\%-0\%) + (16.7\%-0\%) = 166.8\%$.

Lawrence and Lorsch (1967a:258) had said that by "summing the scores for all . . . attributes" it was "possible to arrive at a rough measure of the relative total differentiation." Summing the differentiation scores for the three attributes on the Differentiation Questionnaire gave a score of 7. As there were no other organizations with which to compare this score it could be compared only with the possible differentiation scores which could have been obtained. The range of possible differentiation scores was from 3 to 15. A differentiation score of 7 indicated that the Project organization was not differentiated to a great degree.

State of Differentiation

An assumption which might have been drawn after the analysis of the Environment Questionnaire, was that the Project was differentiated sufficiently to meet with increasing degrees of success the demands made on it by the Board segment, the outside agency segment and the school segment. Observations made of the Project as it was operating supported this assumption, but could not provide empirical proof to verify it.

INTEGRATION

The review of the literature on conflict had indicated a number of possible causes of conflict. Eight causes of conflict were selected for use in measuring the frequency with which possible conflict situations occurred in the Project. Questions based on each of these eight causes were designed and used to form three interview schedules--one for each environment. The construction of the interview schedules was discussed in Chapter 3.

The interview schedules were used in interview situations with some Project staff members, and as questionnaires with other Project staff members. The aim of the interview schedules was to learn the frequency with which a possible conflict situation arose between the Project staff and personnel within each environmental segment and the technique used to resolve or avoid each conflict situation.

The mean rating reported by the Project staff for the frequency of each cause of a conflict situation within each environmental segment is given in Table 5.

The Board Segment of the Environment

Although Project staff members did not have a great deal of contact with Board Members the causes of possible conflict situations on which the questions in the interview schedules were based tapped other sources of conflict situations which did not depend on contact. Nevertheless, the frequency with which possible conflict situations occurred in the Board segment was not considered likely to be high. The frequency with which a possible conflict situation arose due to a particular cause is discussed below.

Scarce resources. Project staff members reported that possible conflict situations arising from the demand for scarce resources occurred more frequently than possible conflict situations arising from any other cause. The average response from the Project staff indicated that, on the scale provided, Board Members asked the Project staff to spend more time in a school or to supply more materials with a frequency greater than "rarely."

Table 5

Mean Frequency Rating for Causes of Conflict Situations
Reported by the Project Staff for Each
Segment of the Environment

Cause of Conflict	Mean rating in each segment ¹			Combined Mean
	Board	School	Outside Agency	
Bargaining over scarce resources	2.33	3.86	2.50	2.90
Bureaucratic	1.50	3.00	1.83	2.11
Systems ²	--	3.14	1.67	2.41
Different values and beliefs	1.83	2.29	1.17	1.76
Authority	1.17	2.29	1.00	1.49
Role and/or status uncertainty ²	--	1.71	1.67	1.69
Personality differences ²	--	1.14	1.17	1.16
Different task expectations	1.33	3.00	1.17	1.83
Overall rating	1.63	2.55	1.52	1.90

¹ Ratings ranged from 1 to 5. Maximum and minimum values of the means were 5.00 and 1.00 respectively.

² Systems conflict, conflict caused through role and/or status uncertainty and conflict arising from personality differences were considered unlikely to occur in the Board segment of the environment.

Bureaucratic conflict. Board Members "very rarely" or "rarely," according to the average response of the Project staff, gave directives or rulings as to actions or procedures Project staff members were to follow when assisting teachers or pupils.

Different values and beliefs. The second greatest cause of possible conflict situations in the Board segment was through the Board establishing policies which were based on values and beliefs to which not all of the Project staff subscribed. Although it was the second greatest cause, the frequency with which possible conflict situations arose was very low.

Authority. One Project staff member indicated that the frequency with which possible conflict situations occurred because of an open or felt difference of opinion with Board Members as to who should direct the Project in the schools was "rarely," the second lowest rating on the scale provided, but all other Project staff members reported that such possible conflict situations "very rarely" occurred.

Different task expectations. Of the causes of possible conflict situations included in the interview schedule, Project staff members rated differences of opinion in task expectations held by the Board for Project staff members and task expectations held by the staff themselves as the second lowest cause of possible conflict situations.

Frequency of possible conflict situations arising. The overall rating of the frequency of possible conflict situations arising from the various causes identified from the literature was very low. On the scale provided, the average rating was slightly more than half way

between "very rarely" and "rarely."

The School Segment of the
Environment

The schools and the Project staff were in constant interaction and it was the school segment where the greatest frequency of possible conflict situations was expected. The responses of the Project staff to the Interview Schedule for School-Project Interaction confirmed this expectation.

Scarce resources. Project staff members reported that principals and/or teachers asked them "frequently" for more time and/or more materials. The demand for scarce resources was clearly the greatest cause of possible conflict situations in the school segment.

Bureaucratic conflict. The Project staff reported that principals gave directions or rulings as to actions to be taken or procedures to be followed in their schools with a frequency which was half way between "very rarely" and "very frequently"--the extremes provided on the rating scale.

Systems conflict. Teachers not being in agreement with the procedures suggested by the Project staff or teachers not carrying out a program in the recommended manner was seen by the Project staff as the second greatest cause of possible conflict situations arising in the school segment.

Different values and beliefs. The Project staff reported that the frequency of occurrence with which possible conflict situations arose because principals and teachers had difficulty in accepting

recommended programs due to their holding of a different priority of educational goals, was slightly more than "rarely."

Authority. The Project staff reported that it was rarely that possible conflict situations arose due to a teacher hesitating to accept a program due to his believing that he had the right to conduct his class in any way that he chose.

Role and/or status uncertainty. Project staff members reported that there were occasions when possible conflict situations occurred because there was uncertainty on the part of principals and teachers over the role and status within the school system of the Project staff but that such occasions, on the average, were less frequent than "rarely."

Personality differences. One Project staff member reported that possible conflict situations arose "rarely" due to personality differences between teachers and himself. All other staff members reported that such possible conflict situations arose "very rarely."

Different task expectations. The task expectations held for the Project staff by teachers and the task expectations which Project staff members held for themselves differed on occasions and "sometimes" gave rise to possible conflict situations. The possibility of conflict situations arising from differences in task expectations was seen by staff members to occur with equal third highest frequency.

Frequency of possible conflict situations arising. The school segment had the greatest frequency of possible conflict situation occurrences.

The Outside Agency Segment of
the Environment

Project staff members did not have a great deal of contact with outside agencies. The frequency with which possible conflict situations arose was not expected to be high.

Scarce resources. As was expected, possible conflict situations arising because outside agencies could not see children as quickly as the Project staff desired were anticipated to occur with a greater frequency than from any other cause of possible conflict situation.

Bureaucratic conflict. Rules and procedures which outside agencies had relating to the interviewing of children and the provision of reports was seen by the Project staff as being the second greatest cause of possible conflict situations. Despite the high rank assigned to this cause the frequency with which possible conflict situations occurred was rated as less than "rarely."

Systems conflict. Most Project staff members indicated that it was "very rarely" that possible conflict situations arose because outside agencies either may not have wished to carry out the tests requested or may have wished to carry out other tests which were not required.

Different values and beliefs. All but one Project staff member selected the lowest rating available to indicate the frequency with which possible conflict situations were caused through outside agencies having goals and objectives which were placed before those which the Project staff saw as being the most important.

Authority. No Project staff member reported possible conflict situations occurring because an outside agency exercised the right to select the tests to be given. Of all causes of possible conflict situations in all environmental segments the rating assigned in this instance was the lowest. .

Role and/or status uncertainty. When asked to indicate the frequency with which a possible conflict situation might arise because outside agencies were uncertain of the role and status of the Project staff, the Project staff indicated that it was between "very rarely" and "rarely."

Personality differences. All but one Project staff member assigned a rating of "very rarely" when asked to indicate the frequency with which possible conflict situations occurred due to personality differences between Project staff members and outside agencies.

Different task expectations. The possibility of conflict situations occurring because outside agencies have different task expectations of the Project staff from those which they themselves have was seen also as being "very rarely" by all but one Project staff member.

Frequency of possible conflict situations arising. From their responses to the Interview Schedule for Project-Outside Agency Integration, Project staff members indicated that they considered that possible conflict situations would arise in the outside agency segment of the environment very rarely. The Project staff spoke highly of the outside agencies and were most appreciative of the cooperation and assistance received.

Integration in Each Environment

The frequency with which potential conflict situations could arise was found to be greatest in the school segment. The Board segment was only slightly more prone to possible conflict situations than the outside agency segment. According to the "overall ratings" given in Table 5 the possibility of a conflict situation arising in any segment of the environment was seen by the Project staff as being unlikely.

The fact that the potential for a possible conflict situation to arise was low suggested that the Project was highly integrated with each of its environmental segments. Before any conclusions could be reached about the adequacy of the states of integration which existed between the Project and each environmental segment information was required about the type of conflict resolution technique which might be called into operation by the Project staff should conflict occur.

Lawrence and Lorsch (1967a:74) had commented:

Not only did we anticipate that confrontation would be the most effective method of resolving conflict, but we also learned from questionnaire data that in the judgement of the managers . . . this was the ideal way in which conflict should be resolved.

Confrontation would appear to be the conflict resolution technique which is likely to be the most successful, but, for a variety of reasons, the professional person may not wish to confront those with whom he is in conflict.

Project staff members had been asked to describe the conflict resolution techniques they would employ should a conflict situation arise in any segment of the environment. In the Board segment the methods of resolving conflict which would have been employed were variations of the withdrawal technique. Withdrawal may not be satisfying

to the Project staff even though it would eliminate conflict with the Board. Withdrawal could be seen, perhaps, as the recognition by the Project staff of the legitimate power of the Board. Viewed from another direction, withdrawal might be seen as the response to the tacit application of legitimate power. Withdrawal may not be the best method of conflict resolution but legitimate power, according to Raven and Kruglanski (1970) is the power base likely to raise the least ire.

A number of conflict resolution techniques were identified in the descriptions given by Project staff members to explain how they would overcome conflict in the school segment of the environment. As examples of smoothing, a conflict situation arising from a personality difference between a Project staff member and a teacher would be resolved by the Project staff member adapting his procedures to suit the teacher; while demands for additional services from Project staff members would be met as best as possible. Compromising would be used in those situations where a Project staff member could not agree on the best remedial procedures to be used with a child. If compromising failed, the Project staff member would withdraw and agree to the suggestions made by the teacher. No Project staff member would employ the forcing technique as a method of conflict resolution.

Conflict situations arising with outside agencies would be solved by confrontation. Project staff members agreed that they would meet with outside agencies and discuss any conflict situation which arose. Project staff members were of the opinion that any conflict which arose with an outside agency would be minor and would be solved through discussion.

If conflict were to occur in each environmental segment and

were to be solved by withdrawal in the Board segment; by smoothing, withdrawal and compromising in the school segment; and by confrontation in the outside agency segment; an assumption which might be made, based on the literature on conflict resolution, would be that conflict in the outside agency segment would be solved the most satisfactorily.

Accepting this assumption and considering it in conjunction with the earlier finding that conflict was likely to occur more often in the Board segment followed by the school segment and then the outside agency segment, the conclusions which were drawn were: the state of integration existing between the Project and the outside agency segment was higher than that existing between the Project and either of the other two segments; and that the state of integration existing between the Project and the school segment was lower than that existing between the Project and either of the other two segments.

Despite these differences, the states of integration existing between the Project and each of its environmental segments was considered to be high.

SUMMARY

The diversity of the three major segments of the environment in which the Project operated was measured by means of an instrument which incorporated sections of an instrument used by Lawrence and Lorsch (1967) and environmental descriptors discussed by Miklos (1970). Project staff members saw the Board segment as being the least diverse. They saw the outside agency segment as being slightly more diverse than the Board segment. The school segment was considered to be the most diverse of the three segments.

Project staff members supplied answers to a Differentiation Questionnaire which followed closely the instrument used by Lawrence and Lorsch (1967) to measure the state of differentiation existing in an organization. The instrument which was used allowed a detailed analysis to be made of various aspects of the Project. The analysis could have been most important in that it may have suggested other areas for in-depth study had the Project been found to be unsuccessful.

The states of integration existing between the Project and each of its environmental segments were estimated from responses to an instrument containing questions relating to the major causes of conflict. Potential conflict situations were considered by the Project staff to be low in all segments. Had conflict occurred in the various segments, the techniques which would have been employed by the Project staff to resolve it would have resulted in the conflict being solved with the greatest degree of satisfaction to all parties in the outside agency segment rather than in either of the other two segments.

The effectiveness of the Project according to the Project staff is discussed in the next Chapter.

Chapter 6

EFFECTIVENESS OF THE PROJECT ACCORDING TO THE PROJECT STAFF

In this Chapter an account is given of the examination of the effectiveness of the Project in each of its three major environmental segments according to the opinions of the Project staff.

The responses of the Project staff to the Goal Achievement Questionnaire were used to examine one of the sub-problems with which the study was concerned, namely, the relationships among environmental diversity, differentiation, integration and effectiveness. The examination of this sub-problem has also been described in the Chapter.

HYPOTHESES

Lawrence and Lorsch had found in their studies that all successful organizations had high states of integration. They had found successful organizations with high, medium and low states of differentiation. The measuring instruments used in this study allowed estimates to be made of the diversity of each environmental segment, of the state of differentiation existing within the Project and of the states of integration existing between the Project and each environmental segment. Within the organization of the Project the state of differentiation was the same for each segment of the environment and, therefore, could be disregarded for this part of the study. The degrees of diversity of the three major segments of the environment were not constant and

the assumption was made that the Project would be more likely to succeed in the environmental segment where the degree of diversity was lowest. Similarly, the states of integration also varied from segment to segment. On the basis of the Lawrence and Lorsch studies the Project was expected to be most successful in the environmental segment where the state of integration was highest.

From the data supplied by the measuring instruments, estimates were made of the diversity of each environmental segment in which the Project operated, and of the states of integration existing between the Project and each of its environmental segments.

The outside agency segment possessed the highest state of integration but was slightly more diverse than the Board segment. The Board segment was not as highly integrated as the outside agency segment but was the least diverse of all the segments. The Lawrence and Lorsch study had suggested that integration was the most important factor in determining the degree of effectiveness therefore the assumption was made that the Project would be more successful in the outside agency segment than in the Board segment.

Stated in terms of segments of the environment, the hypotheses which were examined were:

1. The Project staff would see the Project as being most effective in the outside agency segment of the environment.
2. The Project staff would see the Project as being slightly less effective in the Board segment than in the outside agency segment.
3. The Project staff would see the Project as being least effective in the school segment.

Differences among the degrees of diversity and the states of

integration in the three major segments of the environment were marginal. Differences among the degrees of effectiveness attained by the Project in each segment of the environment were expected, therefore, to be minor.

While comparisons could be made among the degrees of effectiveness determined, there was no way of knowing prior to a measure of effectiveness being obtained whether the Project was sufficiently differentiated to meet the demands made by each environmental segment. If the state of differentiation was such that environmental demands could be met, there were no theoretical barriers, according to the principle derived from the Lawrence and Lorsch study, to the Project achieving its goals.

GOAL ACHIEVEMENT

The goal achievement questionnaire which Project staff members were asked to complete contained goal statements relating to each of the three environmental segments. Project staff members were asked to indicate on a five point scale the strength of their opinion about the degree to which they believed each goal had been achieved. Numerals on the scale indicated strength of feeling as: 1--Very low or not at all; 2--Low; 3--Moderate; 4--High; 5--Very high. The goals relating to the Board segment and the outside agency segment which were selected for inclusion in the questionnaire and the average rating assigned to each are shown in Table 6.

Administration Goals

Project staff members believed that they had achieved considerable success in implementing Board policies. The lowest rating assigned by

Table 6

Mean Rating and Standard Deviation for Each Goal
in the Board Segment and the Outside
Agency Segment

Goal	Mean ¹	Standard Deviation
<u>Board Segment</u>		
1. To implement policies developed by the Board	3.75	0.83
2. To develop regulations and routines for the administration of the Project according to Board policy	2.50	0.70
3. To pass on information about Project goals, policies and the nature of the support service	2.63	0.70
Overall mean of goals 1, 2 and 3	3.29	
<u>Outside Agency Segment</u>		
4. To establish and maintain communication with outside agencies	3.25	1.20
5. To receive support services from outside agencies	3.25	0.83
6. To establish a central or common information filing system with outside agencies	1.25	0.66
Overall mean of goals 4, 5 and 6	2.58	
Mean of goals 4 and 5	3.25	

¹ Maximum and minimum values of the mean were 5.00 and 1.00 respectively.

any staff member to this goal was "moderate."

Although the rating assigned by Project staff members to indicate the degree to which they believed they had been able to develop regulations and routines for the administration of the Project according to Board policy was low, Project staff members were administering the Project according to Board policy. Regulations and routines were not established because of the variety of situations encountered by the Project staff which may have demanded a special rather than a standard approach.

Success in disseminating information about Project goals, policies and the nature of the support service was seen by the Project staff as being from "low" to "moderate." Project staff members did not pay special attention to publicizing Project activities and their schedules did not allow time for general discussions with teachers where questions about Project services could have been raised. The provision of additional time in a school for the Project staff or a directive from the Board to pay greater attention to this goal would have resulted in a higher rating.

The average rating assigned to all administrative goals was 3.29 which indicated that goal achievement was considered to be more than "moderate" in this area. Note should be made of the fact that the comparatively high mean assigned to goal statement 1 was responsible for the overall mean being as high as it is.

Support Services Goals

Communication with outside agencies and the services provided by outside agencies were seen by the Project staff as being satisfactory

to a "moderate" to "high" degree.

The establishment with outside agencies of a central information filing system was a goal which had been given a lower priority by the Project staff than other goals which were directly concerned with the assistance of pupils and teachers. The schedules to which Project staff members kept did not allow them time to meet with outside agencies in order to compare records and collate material.

The average rating for the achievement of goals relating to outside agencies was 2.58 but because resources had not been directed toward achieving one of the goals the average rating was not a true indication of the degree of effectiveness being achieved by the Project in the outside agency segment of the environment. The mean rating increased to 3.25 when the goal relating to the establishment of a central information filing system was ignored.

The standard deviations for goals 4 and 5 were 1.20 and 0.83 respectively, thereby exhibiting a greater scatter among the ratings assigned to these goals than to the goals associated with the Board segment of the environment.

Goals of the School Segment of the Environment

The means and standard deviations of ratings allocated to goals in the school segment of the environment are shown in Table 7.

Table 7 shows that Project staff members believed that they had achieved a high degree of success in assisting teachers with instructional materials appropriate to the individualization of instruction and in assisting teachers through inservice programs in diagnosing the educational problems of pupils. The lowest degree of success was achieved

Table 7

Means and Standard Deviations of Ratings
Assigned to Goals Prescribed for the
School Segment of the Environment

Goal	Mean ¹	Standard Deviation	Rank
1. To assist teachers in using diagnostic instruments that relate to reading and/or arithmetic skills	2.63	1.19	8.5
2. To assist teachers in the diagnosing and/or monitoring of the classroom behavior of children	2.75	1.17	7
3. To assist teachers in analyzing task/skill hierarchies in the basic skill areas	3.13	1.13	4.5
4. To direct teachers to or to provide them with instructional materials and/or media appropriate to the individualization of instruction	4.00	1.41	1.5
5. To assist teachers with the design of teaching routines appropriate to the individualization of instruction in the basic skills	3.13	0.99	4.5
6. To assist teachers with the design of programs for modification of deviant behavior in children	2.63	1.41	8.5
7. To assist teachers with follow-up activities for children with emotional and/or health problems who have been referred to outside agencies	2.86	0.90	6
8. To assist teachers through inservice programs in diagnosing the educational problems of the pupil	4.00	1.31	1.5
9. To assist teachers through inservice programs in constructing and implementing programs designed to correct the educational problems of the pupil	3.50	1.64	3

¹ Maximum and minimum values of the mean were 5.00 and 1.00 respectively.

with the goals relating to increasing the knowledge of teachers about the use of diagnostic instruments dealing with reading and arithmetic skills and to assisting teachers with the design, implementation and evaluation of programs for modification of deviant behavior in children.

When assigning ratings to goals the Project staff showed the greatest amount of agreement with the goals relating to the assistance afforded teachers in the form of follow-up activities for children referred to outside agencies and to the assistance provided for teachers in designing, applying, evaluating and modifying teaching routines appropriate to the individualization of instruction. The least agreement in ratings assigned was for the goal relating to the assistance provided for teachers through inservice activities in constructing and implementing programs designed to correct the educational problems of pupils.

The goals in Table 7 could be categorized as: "Diagnosis and prescription"--goals 1, 2 and 3; "Materials, media and technology"--goals 4 and 5; "Behavior management"--goals 6 and 7; "Inservice"--goals 8 and 9. The means for each category were: "Diagnosis and prescription"--2.84; "Materials, media and technology"--3.56; "Behavior management"--2.80; and "Inservice"--3.75. Project staff members believed that they had achieved the greatest degree of success with inservice activities designed to assist teachers.

ENVIRONMENTAL DIVERSITY, INTEGRATION AND EFFECTIVENESS

On the basis of the Lawrence and Lorsch findings and the data obtained from the application of the measuring instruments in this study,

the hypotheses which were established were:

1. The Project staff would see the Project as being most effective in the outside agency segment of the environment.
2. The Project staff would see the Project as being slightly less effective in the Board segment than in the outside agency segment.
3. The Project staff would see the Project as being least effective in the school segment.

Although there were no extensive differences among the overall ratings assigned to goals in each segment of the environment, the Project staff saw the Project as being least effective in the school segment of the environment, thereby supporting the third hypothesis.

When the goal relating to the establishment of a central information filing system was disregarded, the mean ratings of the goals in the Board segment and in the outside agency segment were almost identical. The fractional difference between the means did not support the hypothesis that the Project would be marginally more effective in the outside agency segment of the environment, but, the hypothesis was not really disproved.

The relationships among environmental diversity, integration and effectiveness were expected to result in the Project being least effective in the segment of the environment where diversity was greatest and the state of integration lowest. The fact that this expectation eventuated was seen as support for the findings of the Lawrence and Lorsch study.

SUMMARY

The chapter began with a discussion of how three hypotheses relating to the effectiveness of the Project were derived from the descriptions of the three major segments of the environment in which the Project operated and from the estimates which were made of the states of integration which existed within the Project and between the Project and each of its environmental segments. These hypotheses were:

1. The Project staff would see the Project as being most effective in the outside agency segment.
2. The Project staff would see the Project as being slightly less effective in the Board segment than in the outside agency segment.
3. The Project staff would see the Project as being least effective in the school segment.

The degree to which Project staff members thought that goal statements prescribed for the Project and relating to each environmental segment had been achieved confirmed the third hypothesis. The Project staff returned almost identical findings for the other two segments thereby not entirely supporting the first two hypotheses. As the differences between the degrees of effectiveness of the Project in these two segments was expected to be marginal the first two hypotheses were not disproved absolutely.

The degree to which administration goals, support services goals and goals of the school segment of the environment were achieved were discussed in detail.

The opinions of a sample of principals of schools associated with the Project and a sample of teachers who had been assisted by the

Project staff as to the effectiveness of the Project and as to ways in which the Project could be improved are discussed in Chapter 7.

Chapter 7

EFFECTIVENESS OF THE PROJECT ACCORDING TO PRINCIPALS AND TEACHERS

A measure of the effectiveness of the Project in each of its three environmental segments had been obtained from the Project staff. The school segment was the one at which the energies of the Project were directed and the one where the most importance was placed on the Project being effective.

ANALYSIS OF QUESTIONNAIRES

Project staff members had provided their opinions as to the degree of success achieved with each goal, but supporting opinions were considered essential if a complete picture of the effectiveness of the Project in the school segment was to be obtained. The people who were in close contact with the Project were considered the logical group from whom opinions should be sought.

Teacher and Principal Questionnaires

Project staff members were asked to name those teachers for whom they had provided assistance. The Teacher Questionnaire discussed in Chapter 3 was sent to a sample of approximately 140 of these teachers.

Opinions were also sought from the principals of schools in Zone 4 which were believed to be participating in the Project. The Principal Questionnaire outlined in Chapter 3 was sent to approximately 78 principals.

The questionnaires contained nine goal statements relating to the operation of the Project in schools, five statements dealing with other aspects of the Project, and three open-ended questions which asked principals and teachers:

1. In your opinion, what are the best features of the Project?
2. On which aspects of the Project would you like to see the Project staff members concentrate their attention?
3. Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?

Principals and teachers were also asked to "Please add any other comments you would like to make about the Project."

As with the questionnaire completed by the Project staff, principals and teachers were asked to indicate on the five point scale the strength of their opinion about each statement. Provision was made for respondents to indicate when a particular statement did not apply.

With questions relating to goal statements, principals were asked, "To what degree do you believe that teachers in your school have been . . ." whereas teachers were asked, "To what degree do you believe that you have been . . ." Project staff members had been asked, "To what degree do you believe that you have assisted teachers to . . ." The questions and statements in the form in which they were presented to teachers are shown below:

1. To what degree do you believe that you have increased your knowledge of the use of diagnostic instruments that relate to reading and/or arithmetic skills?
2. To what degree do you believe that you have been assisted in the diagnosing and/or monitoring of the classroom behavior of children?

3. To what degree do you believe that you have been assisted in analyzing task/skill hierarchies in the basic skill areas?

4. To what degree have you been directed to or provided with instructional materials and/or media appropriate to the individualization of instruction?

5. To what degree have you been assisted in the design of teaching routines appropriate to the individualization of instruction in the basic skills?

6. To what degree have you been assisted with the design of programs for modification of deviant behavior in children?

7.. To what degree have you been assisted by Project staff members with follow-up activities for children with emotional and/or health problems who have been referred to other professionals?

8. To what degree have you been assisted by inservice programs in diagnosing the educational problems of the pupil?

9. To what degree have you been assisted by inservice programs in constructing and implementing programs designed to correct the educational problems of the pupil?

10. To what degree are you in favor of having a group inservice program conducted by all Project staff members in preference to individual assistance from one Project staff member?

11. To what degree do you think that the Project is helping to meet the needs of the learning disabled children in your classroom?

12. What is the degree of duplication of services provided by the Learning Assistance Field Service Project and services provided by other groups?

13. To what degree are you in favor of the Project continuing with its present mode of operation in preference to some other mode?

14. To what degree do programs designed to assist learning disabled children lose their effectiveness because suitable materials are not available?

Questionnaires were returned by 73 principals and 108 teachers. The number of Project staff members, principals and teachers who responded to each statement, the mean rating assigned to each statement and the standard deviation for each statement are shown in Table 8. The number of each statement in the table corresponds with the number given above.

Achievement of Goals

Teachers indicated that they believed that they had increased their knowledge of the use of diagnostic instruments that relate to reading and arithmetic skills to a greater degree than that to which Project staff members believed they had increased the knowledge of teachers in this area. Principals had the lowest rating of the three groups for this goal.

Principals believed that teachers had been assisted in the diagnosing and monitoring of the classroom behavior of children to a higher degree than did the teachers themselves.

High ratings were assigned by all groups to indicate the degree to which teachers had been directed to or provided with instructional materials appropriate to the individualization of instruction.

Project staff members believed that they had assisted teachers to a greater degree than that to which principals and teachers believed

Table 8

Means and Standard Deviations Assigned to Statements
by the Project Staff, Principals and Teachers

	Project staff			Principals			Teachers			All groups		
	N	\bar{X}	SD	N	\bar{X}	SD	N	\bar{X}	SD	N	\bar{X}	SD
1	8	2.63	1.19	67	2.61	1.01	81	2.89	1.01	156	2.76	1.02
2	8	2.76	1.17	63	2.81	0.98	66	2.59	1.07	137	2.70	1.03
3	8	3.13	1.13	68	2.63	1.02	82	2.72	1.08	158	2.70	1.05
4	8	4.00	1.41	70	3.44	1.09	93	3.45	1.30	171	3.47	1.22
5	8	3.13	0.99	69	2.88	1.06	88	2.67	1.21	165	2.78	1.14
6	8	2.63	1.41	50	2.46	0.97	47	2.30	1.12	105	2.40	1.07
7	7	2.86	0.90	46	2.54	1.03	45	2.38	1.34	98	2.49	1.16
8	8	4.00	0.93	59	2.68	1.01	77	2.90	1.29	144	2.87	1.19
9	8	3.50	1.31	60	2.63	1.01	77	2.86	1.11	145	2.80	1.09
10	8	2.88	1.64	67	3.03	1.39	92	2.59	1.48	167	2.78	1.46
11	8	4.00	0.76	67	2.88	1.07	95	3.08	1.15	170	3.05	1.12
12	8	2.38	1.06	68	2.53	1.19	90	1.91	1.17	166	2.19	1.20
13	8	2.88	0.99	69	2.96	1.36	94	3.04	1.27	171	3.00	1.28
14	6	2.17	0.98	68	3.18	1.25	88	3.01	1.28	162	3.05	1.26

that teachers had been assisted in the following areas:

1. In analysing task/skill hierarchies in the basic skill areas.
2. In the design of teaching routines appropriate to the individualization of instruction in the basic skills.
3. In the design of programs for the modification of deviant behavior in children.
4. With follow-up activities for children with emotional and/or health problems who have been referred to outside agencies.

None of the differences among means discussed to date was statistically significant at the five percent level. The only difference which was statistically significant at that level was between the mean ratings assigned by the Project staff and principals and by the Project staff and teachers to goal statement number 8--the degree to which teachers had been assisted by inservice programs in diagnosing the educational problems of pupils. The Project staff assigned a significantly higher mean than that assigned by either of the other two groups.

Variability of Ratings

Within the rating assigned by each group to each goal statement the standard deviations indicated that:

1. The Project staff showed the greatest degree of consistency in their ratings for goal 7--teacher assistance with follow-up activities for children with emotional and/or health problems who have been referred to other professionals, and for goal 8--teacher assistance through inservice programs in diagnosing the educational problems of the pupil; and the lowest degree of consistency in their ratings for goal 4--the degree to which teachers had been directed to or provided

with instructional materials appropriate to the individualization of instruction, and for goal 6--the degree to which teachers had been assisted with the design of programs for the modification of deviant behavior in children.

2. Principals were more in agreement about the ratings which they assigned to goal 6 and to goal 2--the degree to which teachers had been assisted in the diagnosing and/or monitoring of the classroom behavior of children, and least in agreement about the ratings which they assigned to goal 4 and to goal 5--the degree to which teachers had been assisted in the design of teaching routines appropriate to the individualization of instruction in the basic skills.

3. Teachers were not greatly in agreement about the ratings assigned to any goal and showed the greatest variance in the ratings which they assigned to goals 7 and 4.

All groups had difficulty in assigning consistent ratings to goal 4 as indicated by the standard deviations in Table 8 and yet this goal was given the highest mean rating by all groups. This would suggest that there were more individuals in each group who assigned the maximum rating of 5 for this goal than for any other goal.

Ranking of Goals

The Project staff, principals and teachers were consistent in the degree to which they thought success had been achieved with each goal. The rankings for all goals, according to the mean ratings assigned, for all groups are shown in Table 9.

As mentioned above, goal 4--the provision of instructional materials appropriate to the individualization of instruction--was given

Table 9

Ranking of Prescribed Project Goals by Project
Staff, Principals and Teachers

Goal	Ranking			
	Project staff	Principals	Teachers	All groups
1	8.5	7	3	5
2	7	3	7	7
3	4.5	5.5	5	6
4	1.5	1	1	1
5	4.5	2	6	4
6	8.5	9	8	9
7	6	8	9	8
8	1.5	4	2	2
9	3	5.5	4	3

the highest mean rating by all groups. Principals ranked goal 5--assisting teachers with the design of teaching routines appropriate to the individualization of instruction in the basic skills--second, but teachers ranked it sixth. The difference between the means assigned to goal 5 by principals and teachers was slight and not statistically significant. Principals ranked goal 2--assisting teachers with the diagnosing and/or monitoring of the classroom behavior of children--third, but teachers ranked it seventh. Once again, the difference between the means obtained by each group was not statistically significant.

Teachers considered that goal 3--the assisting of teachers in analyzing task/skill hierarchies--was among the three goals for which the greatest amount of success was being achieved. The Project staff and the principals held a different view. Both of these latter groups

placed goal 3 among the three goals for which they thought the Project was achieving the least success.

The amount of agreement among the Project staff, principals and teachers about the degree to which each goal was being achieved was high. A Kendall's coefficient of concordance test was administered and a W value of 0.73 obtained.¹

Goal Categories

When the goal statements were grouped into the categories of, "Diagnosis and prescription," "Materials, media and technology," "Behavior management" and "Inservice" the mean ratings for each category obtained by Project staff, principals and teachers and all three groups combined, gave an indication of the degree of success with which these groups thought the Project was achieving within each of these areas of the school segment of the environment. The means for all groups for each area are given in Table 10.

All groups were of the opinion that the category of goals in which the greatest degree of success was being achieved was "materials, media and technology." The area in which the least success was achieved was "behavior management." Classroom behavior of children which is considered deviant by teachers may take time to remedy.

Principals and teachers thought that the greatest degree of success was being achieved in the area of "materials, media and technology," but the Project staff considered that more success was being achieved in the area of "inservice" education.

¹ The calculation of W is given in Appendix Q.

Table 10
Means Assigned by all Groups to Categorized Goals

Goal categories	Project staff	Principals	Teachers	All groups
Diagnosis and prescription	2.84	2.68	2.74	2.72
Materials, media and technology	3.56	3.16	3.07	3.13
Behavior management	2.80	2.50	2.34	2.44
Inservice	3.75	2.66	2.38	2.84
All goals	3.24	2.76	2.69	2.81

Project staff members believed that the Project was more successful than did principals and teachers. The difference in the degree to which principals and teachers thought that goals were being achieved was extremely small.

The overall ratings assigned to the nine goals showed that all groups considered the Project to be achieving these goals to a "moderate" degree.

Two problems are associated with this rating. One problem is the possibility of a novelty effect causing respondents to give a rating which is higher than the rating which might be assigned after the Project had been operating for a longer period of time. The other problem is the central tendency effect. Respondents may not wish to assign the maximum rating to a goal as they believe that greater success will be achieved as the Project progresses. At the same time, respondents may not wish to assign the lowest possible rating as they believe that any faults may be minor operational difficulties which will be eliminated as the Project proceeds.

Provision existed for all respondents to select the ratings at the lower end of the scale. An overall mean equivalent to greater than moderate success indicated that respondents believed that the Project was effective.

Statements

Table 10 shows that principals were more in favor of having a group inservice program conducted by all Project staff members in preference to individual assistance from one Project staff member than either of the other groups. Teachers were least in favor of this proposal thereby signifying their preference for individual assistance.

One of the most important questions contained in the questionnaires was the one asking respondents to indicate the degree to which they thought that the Project was helping to meet the needs of learning disabled children. Project staff members reported that they thought that the Project was achieving a "high" degree of success. The average rating assigned by the Project staff was significantly higher than the average rating assigned by principals. Principals rated the degree of success as close to "moderate" while teachers gave an average rating which was slightly higher than "moderate." From the point of view of administrators the most encouraging fact was that no group rated the effectiveness of the Project as "very low" or "low."

The statement relating to the degree of duplication of services provided by the Project and by other organizations or bodies resulted in an interesting response. Principals who saw the degree of duplication as being from "low" to "moderate" had a significantly higher average rating than teachers whose rating for this statement was lower than any

rating allocated to any goal or statement by any group. Teachers obviously did not consider the assistance which they were receiving from the Project staff as duplicating the assistance which they were receiving from anyone else.

The responses of all groups indicated that they were "moderately" in favor of the Project continuing in its present form. The question was stated as, "To what degree are you in favor of the Project continuing with its present mode of operation in preference to some other mode?" and did not give respondents an opportunity to suggest an alternative mode. The opportunity to make suggestions was given in a later question which asked for opinions on how the operation of the Project might be improved.

The lack of suitable materials could have jeopardized the success of the Project. The Project staff considered that the lack of suitable materials had constituted only a "low" threat to the Project but principals and teachers believed that the lack of materials would detract from the effectiveness of programs designed to assist learning disabled children to a "moderate" degree.

Variability of Ratings

All groups of respondents showed the greatest variability in the ratings they assigned to question 10--the degree to which they were in favor of having a group inservice program conducted by all Project staff members in preference to individual assistance from one Project staff member, and the least variability for question 11--the degree to which they thought that the Project was helping to meet the needs of learning disabled children.

Questions

The statement was made above that, based on the overall mean assigned by respondents to indicate the degree to which goals were being achieved, the Project could be said to be effective. Support for this contention was given by the qualitative information obtained from the responses of principals and teachers to open-ended questions. Comments on the responses made by principals and teachers to the open-ended questions are given below. Responses of principals and teachers to the four open-ended questions are given in detail in Appendix R.

Question 1. The first question asked was, "In your opinion, what are the best features of the Project?"

Principals considered that the best feature of the Project was the fact that a service was in operation to assist learning disabled children. Twenty-two principals made observations to the effect that diagnostic services which had not been available previously were now being provided. Nine teachers also mentioned this point. Five principals and five teachers noted that the Project was the beginning of a needed service.

Teachers considered that the best feature of the Project, as judged by the number of comments made about any aspect of the service, was the testing.

Both principals and teachers praised the efforts of the Project staff to make materials available and to introduce new materials. Fourteen principals and 16 teachers commented on this point.

The help given to individual children was mentioned as being among the best features of the Project by 11 principals and 17 teachers.

Twelve principals declared that the availability of well-trained personnel was one of the best features of the Project. Fourteen teachers praised the help given to teachers.

Question 2. The second question asked was, "On which aspects of the Project would you like to see Project staff members concentrate their attention?"

Both principals and teachers indicated that they believed that the most important aspect of the Project on which Project staff members could concentrate their attention was helping individual children.

Teachers also placed emphasis on reading programs as being an important aspect of the Project. Fourteen teachers indicated a preference for the Project staff to concentrate on reading programs. Nine principals also stated that reading was an aspect on which the Project staff should concentrate.

The follow-up service was ranked second among features on which the principals wanted attention to be concentrated. Twelve principals mentioned this aspect. Six teachers considered follow-up worthy of additional effort.

Principals and teachers agreed that helping teachers to develop programs warranted further attention. Eleven principals and 10 teachers mentioned that they would like to see more help given to teachers who had to design remedial programs for learning disabled children.

Inservice training for teachers was suggested by 8 principals and 7 teachers while 7 principals and 10 teachers requested that more material be supplied for teachers.

Question 3. Principals and teachers were asked, "Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?"

Even though the limitation "given the present allocation of resources" was stipulated, by far the most popular demand was to provide more time to schools. Given the present limitation of resources this is not possible. Similarly, more help for individual children, more consultants, more materials, more programs, more inservice, more planning time, more help for teachers and more assistance for the consultants--all of which were suggested by principals and teachers as ways of improving the Project--could not be provided unless additional funding were obtained. These suggestions indirectly compliment the services provided by the Project staff.

The suggestions that less time be spent travelling was made by principals and teachers. If this were possible more time could be spent in schools, but the extent of Zone 4 and the location of participating schools made travel essential. The requests to reduce the amount of travel and to cover a smaller area would involve a reorganization of the manner in which the Project is being conducted.

Requests for workshops and for Project staff to spend part of "noon hour" or after school holding discussions with teachers came from principals and teachers in schools where such activities due to time limitation have not yet been part of the service provided by the Project staff. These activities have been conducted by Project staff members.

The Project could be implemented by having the Project staff go as a group to a school and make a complete assessment of those children designated learning disabled. There was only one suggestion

that the Project might be conducted in this manner and this was from a principal who suggested that there should be "a team blitz after early testing." Against this one suggestion were comments from two other principals who suggested that the Project would be improved if only one staff member visited teachers at a time and if a Project staff member were to "isolate one or two needs of the student at a time."

Most of the suggestions for improving the Project took the form of requests for additional help. Apart from the one suggestion discussed above, principals and teachers appeared to be in favor of the Project continuing with its present mode of operation.

Question 4. The final question on the questionnaire was a request rather than a question. Principals and teachers were asked to, "Please add any other comments you would like to make about the Project."

Ten principals and thirteen teachers made the point that the Project was spread too thinly. This comment can be tied directly to the requests for more service and could be seen as an acknowledgement of the success of the Project. The intention of the Board was to give each participating jurisdiction a share of the available service proportionate to the pupil enrolment in that jurisdiction. The scarce supply of available consultant days could not match the demand from schools.

This response also supports the finding from the Environmental Interview Schedule that the school segment of the environment was particularly diverse.

Two principals and three teachers suggested that an alternative

to the Project might be to allocate the money to boards or schools and let the boards or schools obtain their own consultants and/or materials. This could be a feasible suggestion for larger jurisdictions which could afford to hire one or even two specialists. The question of whether these specialists would have access to the same specialized resources as those currently available to the Project is one which might be raised but which cannot be answered.

A comment which was directed at the schools rather than at the Project was that teachers could not spend as much time as they would wish on the programs recommended by the Project staff due to their other commitments in the classroom. A suggestion mentioned above that material be provided for learning disabled children which did not require the teacher to provide a great deal of assistance to the child may be a solution to this dilemma.

A particularly pleasing feature of the analysis of the responses to this question was the number of unsolicited tributes to Project staff members. Nine principals and twelve teachers made comments about the quality of the Project staff.

EFFECTIVENESS OF THE PROJECT

From the responses given by principals and teachers to the questions in the questionnaire relating to goal statements, the Project could be said to be effective. The responses to the open-ended questions showed that, in the main, the Project was being well received in schools. The number of favorable comments made about the Project pointed also to its effectiveness.

Two other comments may be worth noting. Earlier, the observation was made that there was only one suggestion made to change the organization of the Project. This suggestion entailed the dividing of Zone 4 into two areas, A and B. The suggestion was that the Project staff should work in area A for the first six months and in area B for the second six months. This would see a greater concentration of assistance but over a limited period, and would reduce the travelling which Project staff members are obliged to undertake at present.

The other comment worth noting was that teachers would have to be careful not to become too dependent on the Project. If teachers left all remedial work to a specialist they may find that they do not learn to use remedial techniques. The suggestion was made that this danger could be overcome by school boards encouraging, through additional remuneration, regular teachers in their jurisdictions to develop remediation skills and then for these teachers to instruct other teachers in these skills.

SUMMARY

This chapter has discussed the ratings assigned by principals and teachers to indicate the degree to which they felt that particular Project goals were being achieved and their strength of feeling about certain statements. The level of achievement of the goals for which measures were taken varied, but the degree to which all goals were being achieved was believed to be sufficient to allow the assumption to be made that the Project was effective.

The ratings assigned to the statements showed that principals were more in favor of having group inservice programs for teachers

conducted by all Project staff members than were teachers, and that principals believed to a significantly higher degree than did teachers that the Project was duplicating services provided by other groups. The Project staff thought that the Project was helping to meet the needs of learning disabled children to a significantly higher degree than did either principals or teachers even though all groups agreed that success was being achieved. All groups were in favor of the Project continuing with its present mode of operation.

Support for the assumption that the Project was effective was obtained from the responses to the open-ended questions contained in the questionnaire. The number of favorable comments made about the Project and the Project staff and the demands for additional assistance indicated that principals and teachers were in favor of the Project continuing. There were few suggestions for providing the service in alternative forms.

The Chapter which follows discusses in detail the measurement of one other goal prescribed for the Project--the developing in teachers of a more favorable attitude toward learning disabled children and projects similar to the Learning Assistance Field Service Project.

Chapter 8

CHANGE IN THE ATTITUDE OF TEACHERS

TOWARD THE PROJECT

In Chapter 2, the statement was made that the effectiveness of the Project would be determined by the degree to which objectives were achieved. In Chapters 6 and 7, the opinions of the Project staff, principals and teachers as to the degree to which certain objectives had been achieved were discussed. This Chapter contains an account of the degree to which another of the objectives of the Project was achieved.

The objective under consideration in this Chapter was the bringing about in teachers associated with the Project an:

. . . improvement in:

1. Attitude toward disabled learners
2. Optimism that a structured program will assist disabled learners
3. Attitude toward the LAFS type of support program. ("Objectives of the Learning Assistance Field Service," 1972:3).

MEASURING ATTITUDE CHANGE

In an endeavor to obtain a measure of attitude change, an attitude measuring device similar to a semantic differential was constructed.

Discussing the uses of the semantic differential, Maguire (1973: 296) notes that:

Since the publication of The measurement of meaning (Osgood, Suci, and Tannenbaum, 1957) the semantic differential technique has found an important place in educational research methodology. In general, two kinds of uses can be distinguished. The first is an instrument to measure the connotative meaning of concepts. Used in this way, the semantic differential consists of a few adjective scales that are selected to represent each of the well known factors of Evaluation,

Activity and Potency, and subjects are asked to rate concepts on the chosen scales. Factor scores are calculated by summing the ratings on the scales representing the factors The second use of the semantic differential . . . is for structuring some attitude domain.

It was with the first of these uses and with the factor of evaluation or attitude that this section of the study was concerned.

Pilot Study

White and Hall (1970:340) state that:

. . . twelve adjectives have been developed over time and in many studies providing the best means for obtaining a simple structure from measures of person concepts, large-small, unpleasant-pleasant, fast-slow, dull-sharp, thin-thick, happy-sad, weak-strong, good-bad, moving-still, unfair-fair, not active-active, heavy-light.

These adjective pairs, which measure all three factors, and another three pairs which Osgood et al. (1957) claimed measured attitude--clear-hazy, rough-smooth, and vague-precise--were used to form an instrument containing four concepts which were believed to be associated with the Learning Assistance Field Service Project.

In October, 1973, the instrument was given to a pilot group of twenty students then enrolled in an Education course at The University of Alberta, and the responses of the group factor analyzed.¹

The six adjective pairs which White and Hall (1970:340) had found to measure attitude (unpleasant-pleasant; dull-sharp; thin-thick; weak-strong; unfair-fair and passive-active) and the three additional pairs (clear-hazy; rough-smooth; vague-precise) were confirmed by the factor analysis as indicators of attitude.

A further adjective pair (ordered-chaotic) which Osgood et al. (1957) had indicated as a measure of attitude, was added to the nine pairs above and the ten adjective pairs used to describe eight concepts.

¹A discussion of the pilot study is given in Appendix S.

The concepts selected for description were:

1. Socially maladjusted student
2. Learning Assistance Project
3. Student with speech or hearing problem
4. Centrally located Teacher-Advisor who travels from school to school
5. Learning disabled student
6. Program which provides materials and suggestions for teachers of learning disabled students
7. Activities financed through the Educational Opportunity Fund (E.O.F.)
8. Student with poor reading ability.

These concepts were considered to be related to the three areas of teacher opinion in which the Project hoped to bring about an improvement, and were selected after consultation with the Project Director.

November, 1973, Administration

In November, 1973, the instrument was mailed to 130 teachers selected at random from schools participating in the Project. Instructions for completing the instrument and a request for some personal details relating mainly to teaching were included with the instrument. The instrument and the instructions are given as Appendix N.

Teachers were asked to indicate on a seven point scale, by selecting a numeral between 1 and 7, their feelings, as evoked by each adjective pair, toward the particular concept being considered. The adjective pairs were arranged so that favorable ratings did not always occur at the same end of the scale. That is, for five of the adjective

pairs a rating of 1 represented a more favorable attitude than a rating of 7, while for the other five adjective pairs a rating of 7 represented a more favorable rating.

When the responses made by the teachers to each concept were analyzed, the numerals were ordered so that the more favorable rating for each adjective pair was read at the high (or 7) end of the scale. This meant that an average rating on all adjective pairs for a concept of 5 could be interpreted as a more favorable rating than an average of 3 for that concept.

Teacher particulars. Completed instruments were returned by 65 teachers. A description of these 65 teachers in the terms of the questions included with the instrument may be obtained from Table 11.

Table 11

Particulars of Teachers Who Returned
the Instrument

Years of teaching	0-5 = 19	6-10 = 20	11+ = 26
Sex	M = 27	F = 38	
Teaching a remedial class for 30 minutes or more each week	Yes = 12	No = 53	
Taken a course relating to special education	Yes = 11	No = 54	
Had direct (child) contact with LAFS staff	Yes = 33	No = 22	Uncertain = 10
Expect contact	Yes = 43	No = 13	Uncertain = 9

Control group. As a form of control against some outside factor being responsible for an attitude change, 60 people having no association with the Project were asked to complete the instrument. The means of this group, and of the 65 teachers in schools associated with the Project, for each concept are shown in Table 12. The rank order of each concept, determined by the mean obtained by the control group and by the teachers associated with the Project, is also shown.

Means obtained for each concept by the control group were tested to see whether they were significantly different from the means obtained by the other group. Significance in all cases was defined as the statistical possibility that there were less than five chances in one hundred that the difference could have occurred by chance.

Table 12

Control Group and Project Teacher Group Means
and Rankings for each Concept

Concept	Control group		Project group	
	Mean ¹	Rank	Mean ¹	Rank
1. Socially maladjusted student	3.27	8	3.17	7
2. Learning Assistance Project	4.98	1	4.73	3
3. Speech or hearing problem	3.52	6	3.53	5
4. Teacher-Advisor	4.45	3	4.76	2
5. Learning disabled student	3.56	5	3.32	6
6. Program with materials	4.91	2	4.78	1
7. E.O.F. activities	4.37	4	4.61	4
8. Poor reader	3.28	7	3.16	8

¹ Maximum and minimum values of the means were 7.00 and 1.00 respectively

The mean obtained by the control group for each concept did not differ significantly from the mean of the corresponding concept obtained by the sample of teachers from schools associated with the Project. There was a high degree of agreement about the order in which the concepts were placed.

The responses of the sample of teachers associated with the Project were then categorized according to the classifications given in Table 11 and the means in each category examined. As there were very few significant differences among means not all means have been reported. Significant differences among means which did occur within each category are discussed below.

Years of teaching experience. The means obtained for concept 4, "centrally located Teacher-Advisor who travels from school to school," by the group with 0 to 5 years of experience and the group with 6 to 10 years of experience both differed significantly from the mean obtained by the group with 11+ years of experience. Apparently, this latter group held a more favorable opinion of the teacher-advisor. The group with 11+ years of experience however, had a significantly lower mean for concept 1, "Socially maladjusted student," than the group with 6 to 10 years of experience.

The most experienced teachers ranked concept 4 first, whereas the least experienced teachers ranked concept 4 third. On the other hand, those teachers with the most experience ranked concept 6, "Program which provides materials and suggestions for teachers of learning disabled students," fourth while the other two groups ranked concept 6 first.

Males and females. Females obtained significantly higher means than males for concept 4 and for concept 7, "Activities financed through the Educational Opportunity Fund (E.O.F.)." Females ranked concept 6 fourth, whereas males ranked concept 6 first.

Teaching remedial classes. Teachers teaching remedial classes did not have a mean for any concept which was significantly different from the mean obtained by other teachers for the same concept but teachers of remedial classes ranked the Learning Assistance Project first and the Program which provides materials fourth, whereas other teachers ranked these concepts third and first respectively.

Taken a special course. The teachers who had taken a special course did not obtain means which differed significantly from the means obtained by those teachers who had not taken a special course. The rankings of the concepts by the two groups were almost identical.

Had contact (pupil) with L.A.F.S. staff. The rankings of the concepts by those teachers who had had contact with the L.A.F.S. staff and by those teachers who had not were also very similar. There were no significant differences between the means obtained by the two groups for each concept.

Rankings. A more detailed picture of the rankings of the concepts made by the various categories into which the teachers were placed is given in Table 13.

The rankings are very similar and it can be seen that rankings 1 to 4--concepts 2, 4, 6 and 7--form one group, while rankings 5 to 8 form another. The first group comprises concepts related to the Project

Table 13

Rankings of Concepts by Each Group

Concept	Control	0-5	6-10	11+	Male	Female	Tchg	Not Tchg	Taken	No	No
	Group	Years	Years	Years			Rem.	Rem.	Course	Course	Contact
1	8	7	6	7	8	7	7	7.5	7	7	8
2	1	3	2	2	3	2	1	3	2	3	2
3	6	5	5	5	5	5	5	5	5	5	5
4	3	2	3	1	2	1	2	2	3	2	1
5	5	6	7	6	6	6	6	6	6	6	6
6	2	1	1	4	1	3	4	1	1	1	4
7	4	4	4	3	4	4	3	4	4	4	3
8	7	8	8	8	7	8	8	7.5	8	8	7

and the second is made up of those concepts relating to disabled learners.

In every case the mean of the lowest ranked concept in the first group differed significantly from the mean of the concept ranked highest in the second group. That is, the mean of concept 3 which was ranked fifth in all but one case is significantly lower than the means of concepts 6 and 7--the only concepts to be ranked fourth by any category of teacher.

May, 1974, Administration

In May, 1974, the instrument was distributed to the same groups of teachers and the request made that the teachers complete and return the instrument.

Teacher particulars. Fifty-three teachers in schools associated with the Project returned the instrument as did 38 teachers in the control group. The details of the teachers in schools associated with the Project who returned the instrument are shown in Table 14.

Table 14

Particulars of the Teachers Who Returned
the Instrument in May, 1974

Years of teaching	0-5 = 16	6-10 = 15	11+ = 22
Sex	M = 16	F = 37	
Teaching a remedial class for 30 minutes or more each week	Yes = 9	No = 44	
Taken a course relating to special education	Yes = 16	No = 37	
Had direct contact with LAFS staff	Yes = 44	No = 5	Uncertain = 4

Control group. The means given to each concept by the two groups and the rankings of each concept based on the means are shown in Table 15.

The mean of the control group for concept 6, "Program which provides materials and suggestions for teachers of learning disabled students," was significantly higher than the mean obtained by teachers in schools associated with the Project. An examination of Table 16, which is a combination of Tables 12 and 15, shows that there was no significant increase in the means obtained by the control group for concept 6 on the two applications, and no significant decrease in the means obtained by the Project teacher group for concept 6 between November, 1973 and May, 1974.

Table 15

Control Group and Project Teacher Group Means and
Rankings for Each Concept, May, 1974

Concept	Control group		Project group	
	Mean ¹	Rank	Mean ¹	Rank
1. Socially maladjusted student	3.35	6	3.26	8
2. Learning Assistance Project	4.86	2	4.58	1
3. Speech or hearing problem	3.53	5	3.51	5
4. Teacher-Advisor	4.54	4	4.57	2
5. Learning disabled student	3.22	8	3.37	6
6. Program with materials	5.13	1	4.56	3.5
7. E.O.F. activities	4.58	3	4.56	3.5
8. Poor reader	3.24	7	3.30	7

¹ Maximum and minimum values of the mean were 7.00 and 1.00 respectively.

Table 16

Control Group and Project Teacher Group Means and Rankings for Each Concept, November, 1973, and May, 1974

Concept	Control group			Project teacher group		
	Nov. 1973 Mean	Nov. 1973 Rank	May 1974 Mean	Nov. 1973 Mean	Nov. 1973 Rank	May 1974 Mean
1. Socially maladjusted student	3.27	8	3.35	3.17	7	3.26
2. Learning Assistance Project	4.98	1	4.86	4.73	3	4.58
3. Speech or hearing problem	3.52	6	3.53	3.53	5	3.51
4. Teacher-Advisor	4.45	3	4.54	4.76	2	4.57
5. Learning disabled student	3.56	5	3.22	3.32	6	3.37
6. Program with materials	4.91	2	5.13	4.78	1	4.56
7. E.O.F. activities	4.37	4	4.58	4.61	4	4.56
8. Poor reader	3.28	7	3.24	3.16	8	3.30

One other significant difference occurred. The mean obtained by the control group in May, 1974, for concept 5, "Learning disabled student," was significantly lower than the mean obtained in November, 1973. No reason for this change in attitude by the control group was apparent.

Years of teaching experience. The differences in means which occurred in the November application among groups of teachers with different numbers of years of experience did not occur in the May application.

Teachers with 0 to 5 years of experience did not record any significant differences between means for concepts on the first and second applications of the instrument. Means for six of the concepts were lower in May than they were in November but these differences could be ascribed to chance. Similarly, teachers with from 6 to 10 years of experience had a lower mean for each concept in May than they had had in November but none of the differences was significant. The reverse of the trend was observed with the means of the teachers with more than 10 years of experience. This latter group had higher means for five of the concepts but, once again, no difference between means was statistically significant.

Males and females. Males recorded six means for concepts in May which were lower than those obtained in November but no difference was significant. Females had four means which were lower, three which were higher and one which was constant, between the two applications of the instrument, but no difference was significant. There were no differences between means obtained by males and females in the May

application which were significant.

Teaching remedial classes. Tests for significant differences between means were made of the means obtained by the teachers in schools associated with the Project who were teaching a remedial class for thirty minutes or more each week and by teachers who were not teaching a remedial class. No significant differences between means were observed.

Tests were also made to see whether either group had recorded any significant changes between the November and May administrations, but, once again, no significant differences were recorded.

Taken a special course. In the November administration of the instrument, no significant differences between means obtained by those teachers who had taken a course dealing with special education and by those teachers who had not were observed. This finding was constant for the May application.

Had contact (pupil) with L.A.F.S. staff. Table 17 gives the means obtained in the second application of the instrument by teachers who had had contact with the Learning Assistance Field Service staff and those who had not.

The means obtained for concept 6, "Programs which provide materials and suggestions for teachers of learning disabled students," and for concept 7, "Activities financed through the Educational Opportunity Fund (E.O.F.)," by the teachers who had had contact were higher than those obtained by teachers who had had no contact with the Project staff up to May, 1974. These differences were not significantly different due partly to the fact that only five of the teachers who

Table 17

Concept Means and Ranks of Groups Who Had and
Who Had Not Had Contact with L.A.F.S.
Staff, May, 1974

Concept	Had Contact		No Contact	
	Mean	Rank	Mean	Rank
1. Socially maladjusted student	3.24	8	3.36	7
2. Learning Assistance Project	4.54	4	4.26	1
3. Speech or hearing problem	3.53	5	3.40	6
4. Teacher-Advisor	4.58	3	4.24	2
5. Learning disabled student	3.40	6	3.50	5
6. Program with materials	4.60	2	3.72	4
7. E.O.F. activities	4.71	1	3.94	3
8. Poor reader	3.32	7	3.22	8

returned the instrument reported that they had had no contact with a Project staff member.

In Chapter 5, comment was made on the scope of the Project. Support for the breadth of the Project may be seen in the fact that approximately 66 percent of those teachers who returned the instrument in November, 1973, reported that they had had contact with the Project staff but by May, 1974, this figure had increased to over 90 percent.

Means obtained on the two applications of the measure by the group who had had contact with the Project staff did not differ significantly but one significant difference was observed by the group reporting no contact with the Project staff. In November, 1973, those teachers who had not had contact with the Project staff recorded a mean of 4.81 for concept 6, "Program which provides materials and suggestions for teachers of learning disabled students." In May, 1974, the mean

obtained by these teachers was 3.72.

An explanation for this significant change in attitude which might be proposed by those in support of the Project, is that teachers who have not had an opportunity to receive the assistance afforded their contemporaries by the Project staff are somewhat disgruntled.

CATEGORIZATION OF CONCEPTS

After the first administration of the instrument, the concepts, when they were ordered by the value of their means, were observed to fall into two categories. One category contained the concepts relating to the Project and the other comprised the concepts relating to learning disabled students. This categorization was duplicated on the second administration of the instrument.

The division between the categories was distinct. On the second administration, the concept ranked lowest in the category containing concepts relating to the Project had, with one exception, a significantly higher mean than concept 3, "Student with a speech and/or hearing problem," the concept ranked highest in the second category by all groups of teachers. For the division of the concepts into two categories to occur again on the second administration of the instrument is strong support for the supposition made after the November, 1973, administration that teachers have a more favorable attitude toward those concepts relating to the Project than toward learning disabled students. This attitude does not appear to have changed.

Table 18 gives the rankings made by each group of teachers for all concepts on the first and second administrations of the instrument.

Table 18

Rankings of Concepts by Each Group November,
1973 and May, 1974

Concept	Control Group		Project Group		0-5 Years		6-10 Years		11+ Years		Male		Female		Tchg Rem.		Not Tchg Rem.		Taken Course		No Course		Contact		No Contact	
	73	74	73	74	73	74	73	74	73	74	73	74	73	74	73	74	73	74	73	74	73	74	73	74	73	74
1	8	6	7	8	8	6	6	8	7	8	8	8	7	7	7	7	7.5	8	7	7	7	8	8	8	7	7
2	1	2	3	1	2	2	2	1.5	2	3	3	8	2	7	1	3	3	1	2	1	3	3.5	3	4	1	1
3	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6
4	3	4	3	4	3	4	3	1.5	3	2	2	2	3	2	2	1	2	4	3	2	2	3.5	1	4	2	1
5	5	8	6	6	6	7	7	6.5	6	6	6	7	6	6	6	6	6	6	6	8	6	6	6	6	6	5
6	2	1	1	3.5	1	1	1	4	4	4	1	1	3	4	4	4	1	2	1	4	1	1	4	2	3	4
7	4	3	4	3.5	4	4	4	3	3	1	4	2	4	3	3	2	4	3	4	3	4	2	3	1	4	3
8	7	7	8	7	7	8	8	6.5	8	7	7	6	8	8	8	8	7.5	7	8	6	8	7	7	7	8	8

The most noticeable feature in Table 18 is the consistency of the rankings. Changes which occurred were due generally to marginal differences in the means. An exception that occurred was the rankings assigned on the two administrations by the control group to concept 5, "Learning disabled student." A significantly lower mean was obtained in the May administration and the ranking dropped from fifth to eighth. An explanation for this change of attitude could not be found.

The only other concept for which the rank changed three places was concept 6, "Program which provides materials and suggestions for teachers of learning disabled students." Teachers who had taken a course relating to special education ranked concept 6 first in November, but ranked it fourth in May, 1974. The mean fell by almost half a point although this was not a statistically significant change. The mean obtained by concept 2, "Learning Assistance Project," which was ranked first by this group of teachers on the second administration of the instrument was not statistically significantly different from the mean assigned to concept 6 on this administration.

ATTITUDE CHANGE

If the measuring instrument gives a valid indication of attitude change, no significant change in attitude can be said to have occurred in teachers in schools associated with the Project in the time between the two applications of the instrument.

The Project had been in operation for almost one school year when the second administration of the instrument was made. This period may not have been long enough for any changes in attitude to have occurred. Remarks made by teachers while the operation of the Project

in their schools was being observed, and comments made by principals and by teachers on the questionnaires which they returned, suggested that by May, 1974, the impact of the Project was just beginning to be felt. This may account for the fact that up to the time of the second administration of the instrument, no significant attitude change toward the Project or learning disabled students had taken place.

The questionnaires returned by principals and teachers were discussed in Chapter 7. The number of favorable comments about the Project on these questionnaires was far greater than the number of unfavorable comments. The measuring instrument used, if it measures attitude change, may measure attitudes which have taken many years to acquire and are more ingrained. Such attitudes may take time to change. Outwardly, teachers appears to be in favor of the Project but the changes in attitude brought about by the Project may be more subtle and may not be evident for some time.

Had the Project staff made a concerted effort to bring about in teachers a change in attitude toward the Project and toward disabled learners, a different result may have been obtained from the instrument, but attitude change was seen by the Project staff as being an incidental accompaniment to the main theme which was assisting disabled learners and their teachers.

SUMMARY

This Chapter has described an attempt to learn whether a change in attitude toward the Learning Assistance Field Service Project and toward learning disabled students occurred in teachers in schools associated with the Project. Attitude was measured by an instrument

which used ten adjective pairs to describe eight concepts which were believed to be related to the Project or to learning disabled students. No significant changes in attitude were observed in teachers or in any group of teachers categorized according to: years of experience; male and female; teaching or not teaching a remedial class; and having taken or not taken a course relating to special education. The only significant change which occurred was in teachers categorized as not having had contact with the Project staff. This group of teachers had a significantly less favorable attitude toward concept 6, "Program which provides materials and suggestions for teachers of learning disabled students," in May, 1974, than they had had in November, 1973.

The lack of any significant changes in attitude by the group of teachers in schools associated with the Project as a whole may be due to the fact that:

1. The instrument used does not measure attitude change.
2. The attitudes being investigated are not superficial and are those which require a long period of time to change.
3. The effectiveness of the Project was just beginning to be appreciated at the time of the study.
4. The Project staff considered the bringing about of an attitude change in teachers to be an incidental goal.

One further possibility which was considered as an explanation for the lack of any significant change in attitude was that teachers did not find the Project effective. This possibility was discounted as the responses by principals and teachers to the questionnaires directed to them contained very few unfavorable comments about the Project.

When concepts were ranked according to the means obtained, two distinct categories were found. After the measuring instrument had been administered in November, 1973, the observation was made that concepts relating to the Project had means which were significantly higher than the means of concepts relating to learning disabled students. In the May, 1974, administration, the same phenomenon was observed. This dichotomy was found to exist when teachers were categorized according to years of experience, sex, teaching or not teaching a remedial class, having taken or not having taken a course relating to special education, and having contact or not having contact with the Project staff. In all but one group of respondents, concepts in the first category had significantly higher means than concepts in the second category, suggesting that teachers had maintained a more favorable attitude toward the Project than toward learning disabled students.

This Chapter completes the description of the analysis of the instruments used to gather data about the Learning Assistance Field Service Project. The final Chapter contains a summary of the study, the conclusions drawn as to the usefulness of the instruments and the effectiveness of the Project, and implications for the further development of the instruments and the continued operation of the Project.

Chapter 9

SUMMARY, CONCLUSIONS AND IMPLICATIONS

A summary of the study, the conclusions reached and the implications drawn are presented in this Chapter.

SUMMARY

The aims of this study were to develop a set of instruments which would permit aspects believed to be associated with effective organizations to be studied, and to use these instruments to assist in the determining of whether the Learning Assistance Field Service Project operated by the Central Alberta Regional School District Number Three was considered to be effective.

The literature on the evaluation of the educational innovations was surveyed but no account could be found of an evaluation of an undertaking similar to the Learning Assistance Field Service Project.

From the literature on the evaluation of organizations in industry, the methodology and instruments used by Lawrence and Lorsch (1967a) were seen as being the most applicable from which to develop instruments to examine the Learning Assistance Field Service Project.

The principle developed from the Lawrence and Lorsch (1967a) study was that the effective organization was the one which was sufficiently differentiated to meet the demands made by the environment and, at the same time, possessed a high degree of integration. Integration in this study was interpreted as conflict resolution.

The diversity of each of the three major segments of the environment in which the Project was seen as operating--the Board segment, the school segment and the outside agency segment--was measured by means of an Environment Interview Schedule. The Environment Interview Schedule contained questions derived from the instrument used by Lawrence and Lorsch (1967a) to measure environmental diversity and questions based on environmental descriptors discussed by Miklos (1970).

Differentiation within the Project was determined by an instrument based on the instrument used by Lawrence and Lorsch (1967a) to investigate the states of differentiation existing in organizations.

The instrument designed to measure integration contained eight questions which represented eight causes of conflict encountered in a review of the literature on conflict.

Separate instruments were developed to measure the diversity of each segment of the environment and the states of integration existing between the Project and each segment.

As a measure of effectiveness the criterion accepted was the degree to which prescribed enabling objectives were achieved. An instrument containing questions based on goals prescribed for each segment of the environment in which the Project was operating was constructed for administration to the Project staff. A second instrument containing only those goals prescribed for the school segment of the environment was constructed for administration to the principals of schools participating in the Project and to teachers for whom assistance had been provided by the Project staff. Questions on other aspects of the operation of the Project as well as four open-ended questions were included in both instruments.

The Environment Interview Schedule, the Differentiation Interview Schedule and the Integration Interview Schedule were administered to the Project staff. The degree of diversity of each segment of the environment, the state of differentiation existing within the Project and the states of integration existing between the Project and each segment of the environment were determined from the responses of the Project staff to each interview schedule.

On the basis of the information obtained about the degrees of diversity of the environmental segments and the states of differentiation and integration, hypotheses which related to the extent to which the Project would be effective in each environmental segment were formed. The responses made by the Project staff to the goal achievement questionnaire confirmed the hypotheses.

The responses of principals and teachers to the goal achievement questionnaire revealed that, in the opinion of these two groups, goals prescribed for the school segment of the environment were being achieved.

The Project staff, principals and teachers, for the most part, were in agreement as to the degree with which goals were being achieved. The only statistically significant differences which occurred among the three groups were:

1. Project staff members believed they had assisted teachers through inservice programs to diagnose the educational problems of the pupil to a greater degree than that to which principals and teachers believed that teachers had been assisted.

2. The Project staff believed that the Project was helping to meet the needs of learning disabled children to a greater degree than that to which principals believed the Project was being successful in meeting

these needs.

3. Principals believed that the Project was duplicating services being provided by other groups to a greater degree than did teachers.

The responses by principals and teachers to the open-ended questions provided more information about the Project. Both groups appeared to be pleased that the Project was in operation and appreciated the help given by the Project staff. Only one alternative method of operation for the Project was suggested--that there be "a team blitz after early testing." No comments were made suggesting that Project staff members should change their mode of operation in the classroom or with disabled learners. Most of the suggestions which were offered for the improvement of the Project were dependent on the provision of additional funds.

To learn the degree of success the Project had achieved in a six month period in attaining the objective of changing the attitude of teachers toward disabled learners and toward projects similar to the Learning Assistance Field Service Project, an attitude measuring device was administered in November, 1973, to 130 teachers selected at random from schools associated with the Project. The attitudes these teachers had toward eight concepts believed to be related to the Project were measured. The instrument was administered to the same group of teachers in May, 1974, and further measurements of the attitudes toward these concepts were obtained.

Sixty teachers having no association with the Project were asked to complete the instrument at the same times as the teachers who were associated with the Project. This step was taken as a measure of protection against some factor other than the Project being responsible

for any change in attitude which might have occurred.

The May, 1974, application of the instrument did not reveal any significant changes in attitude toward the concept. This may have been because teachers had not changed their attitudes but it may also have been because the instrument does not measure attitude change or because the attitudes which were being measured have taken a long time to establish and may take almost as long a time to change.

CONCLUSIONS

In Chapter 2, the point was made that the purpose of an evaluation was to provide information for decision makers. The study which has been made of the Learning Assistance Field Service Project has provided information about the instruments which were designed to assist in determining whether the Project was effective and about the effectiveness of the Project.

Problem 1

The first problem with which this study dealt was "To develop a set of instruments which would provide information about the effectiveness of an organization."

The instruments developed from those used by Lawrence and Lorsch are believed to supply information without which any evaluation of an educational organization based solely on pupil outcomes--such as, for example, classifying a school system as "excellent" because less than one percent of the pupils have to repeat a grade--would be incomplete.

A discussion of each instrument is presented below.

The Environment Interview Schedule

The Environment Interview Schedule enabled factors which impinged on the organization from external sources to be examined. Each component supplied a separate piece of information.

Environmental certainty. The concept of "environmental certainty" used by Lawrence and Lorsch (1967a) could be seen to be most useful for identifying potential areas of difficulty within an organization. If employees and/or departments were uncertain of their job requirements confusion might soon develop within an organization.

Uncertainty of causal relationships. If the implementation of an activity were to be hindered by some factor external to the organization, the question or questions asked in order to learn whether there is any "uncertainty of causal relationships" may help in the identification of the factor.

Time span of definitive feedback. The responses of the Project staff showed that the time which it took feedback to reach a Project staff member could be vital to the operation of an organization. An implication which might be drawn is that if feedback did not occur within a reasonable time wrong decisions could be made and wasteful programs introduced or continued.

Environmental descriptors. The five environmental descriptors given by Miklos allowed aspects of the environment to be examined which might be overlooked in an examination of the environment within which an organization operated. Derr and Gabarro (1972:55) had made the point that defining the environment in a school setting was a

problem, but the questions used in this study which were based on the five descriptors simplified this task considerably.

The Differentiation Interview Schedule

With a single unit organization comparisons of states of differentiation as made by Lawrence and Lorsch in their study were not possible. This does not mean that an estimation of the state of differentiation existing within a single unit organization is not of value. If an organization is not effective an examination of the aspects Lawrence and Lorsch considered to be components of differentiation might reveal that certain features of the organization are malfunctioning.

Structural characteristics. An analysis of the structural characteristics of an organization made by using the Lawrence and Lorsch instrument could show whether more frequent and more specific reviews of performance might be required and whether the number of formal rules within the organization was too great or was insufficient to allow the smooth running of the organization.

Time orientation. In a single unit organization if staff members were to be oriented differently as far as the time in which certain objectives were to be achieved, conflicting schedules could cause irregular demands for resources and possibly destroy the cohesiveness of the organization.

Goal orientation. Staff members who had dissimilar goal orientations could prevent the organization from having unity of purpose.

Lack of unification might prevent the organization from being effective.

The Integration Interview Schedule

Successful conflict resolution techniques appeared to be most important in the Lawrence and Lorsch (1967a) study. All effective organizations in the Lawrence and Lorsch study had high degrees of integration. In the study of the Learning Assistance Field Service Project there were no sub-units between which states of integration could be measured. What was measured were the states of integration existing between the Project and each major segment of the environment in which it operated. Integration was interpreted as the potential for conflict to arise as the Project interacted with each segment of the environment.

Although eight of the most common causes of conflict were investigated by the Integration Interview Schedule, the potential for conflict to arise in any environmental segment in which the Project operated was believed to be low. The findings from responses to the Integration Interview Schedule confirmed suppositions about potential conflict which were made during observations of the Project in operation.

The Attitude Measuring Instrument

The attitude measuring instrument which was not based on the Lawrence and Lorsch methodology was specific in its use and has no general applicability. The instrument was unable to detect any change in attitude but this may not be the fault of the instrument.

An interesting feature was that on separate applications with two different populations the instrument enabled an almost identical

categorization to be made of the concepts which were examined. This suggested that the instrument was at least reliable as far as the grouping of concepts was concerned.

The greatest significance of this consistency of grouping is that the technique employed appears to be a valid one for measuring strength of attitude toward concepts encountered in an educational setting.

Usefulness of the Instruments

Because the instruments which were developed were able to provide information about the effectiveness of the Project and could be seen to be applicable to the study of other undertakings in education, success was believed to have been achieved in the developing of "a set of instruments which would provide information about the effectiveness of an organization."

The Environment Interview Schedule allowed a comprehensive description to be made of each segment of the environment within which the Project operated. The school segment was found to be much more diverse than either the Board segment or the outside agency segment. Comments made by principals and teachers to the effect that the Project was spread too thinly were another way of saying that under the existing conditions the supply of resources available to the Project was not sufficient to meet the demands of the diverse school segment.

The instrument was believed to have possible use in the evaluation of any organization. If an organization were not aware of the diversity of the environment within which it operated and could not cope with the demands which were made on the organization, it may have experienced difficulty in being effective.

If administrators within an organization were to make a thorough investigation of all the environmental segments within which the organization intended operating and made plans accordingly, the chances of the organization being successful should be greater than if no such investigation were conducted.

Responses by Project staff members to the Differentiation Interview Schedule revealed that they did not consider the Project to be highly differentiated.¹ The state of differentiation existing within an organization such as the Project may not be as important as other aspects such as leadership and dedication which are not taken into account by the Differentiation Interview Schedule.

The greatest use of the instrument would appear to be with complex organizations but it also has considerable value in that it directs anyone examining an organization to features which might otherwise be overlooked.

If the resolution of conflict plays as an important a role in determining the effectiveness of an organization as the Lawrence and Lorsch study would appear to show, the Integration Interview Schedule is possibly the most important of the instruments developed. In each environmental segment with which the Project interacted the opportunity for a conflict situation to arise was seen to exist. The instrument showed that the states of integration existing between the Project and each environmental segment were high, but it also showed that certain of the traditional causes of conflict might lead to the development of a conflict situation in any of these segments of the environment.

¹ According to the theoretical limits which were established, the Project was not highly differentiated, but it may have been sufficiently differentiated for its purpose.

Sub-problem 1

The investigation of the sub-problem which was related to problem 1 involved examining the relationships among environmental diversity, differentiation, integration and effectiveness. The Lawrence and Lorsch studies had suggested that the effective organization was the one which was sufficiently diverse to meet the demands imposed by its environment and yet, at the same time, possessed a high degree of integration.

The application of the instruments described above yielded data which suggested the following hypotheses:

1. The Project would be effective to the highest degree, comparatively speaking, in the outside agency segment of the environment.
2. Within the three environmental segments in which it operated, the Project would be least effective in the school segment.
3. The degree to which the Project would be effective in the Board segment would be fractionally less than the degree to which it was effective in the outside agency segment of the environment.

Responses by Project staff members to the goal achievement questionnaire showed that, contrary to expectations, they thought that the Project was fractionally more effective in the Board segment than in the outside agency segment and that, as anticipated, the Project was least effective in the school segment.

These findings were believed to support the proposition developed from the Lawrence and Lorsch study. The findings are also believed to support the believe that the concepts used by Lawrence and Lorsch have relevance for the study of school organizations.

The instruments which were developed for the purposes of this

study are also believed to have use for evaluating educational innovations which involve single unit organizations and for which estimates of the states of differentiation and integration existing within the organization cannot be obtained by using the instruments developed by Lawrence and Lorsch.

Problem 2

The second problem with which this study was concerned was "To examine the effectiveness of the Learning Assistance Field Service Project operating in Zone 4 in Alberta."

To assist in the determining of whether the Project was effective, four sub-problems were stated. A discussion of these sub-problems follows.

Sub-problem 2. Sub-problem 2, the first sub-problem relating to problem 2, was "To learn the degree to which the Project staff considered that the Project was effective."

At the commencement of the study, the assumption was made that the Project would be considered effective if the objectives prescribed for it were achieved. In Chapter 6, the responses made by the Project staff to the goal achievement questionnaire were discussed. The finding made was that the Project staff considered that the goals in the Board segment of the environment and two of the three goals in the outside agency segment of the environment were being achieved to a better-than-moderate degree. One of the objectives prescribed for the Project--"To establish a central or common information filing system with outside agencies"--was not being achieved as no major attempt was made during the first year of operation of the Project to implement this goal.

The means reported in Table 7 indicated that the Project staff believed that goals prescribed for the school segment of the environment had been achieved to a "moderate" degree. To the question "To what degree do you think that the Project is helping to meet the needs of the learning disabled children in your school?" Project staff members answered that they believed that the Project was helping to meet the needs of learning disabled children to a high degree.

When the achievement of goals in each segment of the environment was considered, project staff members were to be of the opinion that the Project was effective.

Sub-problem 3. Sub-problem 3 was "To learn the degree to which principals saw the Project as effective."

The average ratings which principals allocated to goal statements relating to the school segment of the environment were given in Table 8. Principals considered that the goals prescribed for the school segment were being achieved to a "moderate" degree. With the exception of the goal--"To direct teachers to or to provide them with instructional materials and/or media appropriate to the individualization of instruction"--which principals saw as being achieved from a moderate-to-high degree, principals had only a 7 per cent variation in the mean rating which they assigned to goals.

On the basis of the findings reported in Chapter 7, principals were believed to consider that the Project was effective. Support for this belief came from the responses which principals made to the open-ended questions. In the main, comments made by principals were very favorable to the Project.

Sub-problem 4. Sub-problem 4 was "To learn the degree to which teachers saw the Project as effective."

A study of Table 8 reveals that teachers considered that the goals which related to the school segment of the environment were being achieved to a slightly higher degree than that to which principals thought these goals were being achieved. Teachers, therefore, were believed to be of the opinion that the Project was effective. Responses from teachers to the open-ended questions showed that they were grateful that the Project was in operation.

Sub-problem 5. Sub-problem 5 was "To learn whether teachers changed their attitudes toward learning disabled children and projects similar to the Learning Assistance Field Service Project after being associated with the Project."

As reported above, the measuring instrument was unable to detect a change in attitude on the part of teachers associated with the Project toward learning disabled children or toward projects similar to the Learning Assistance Field Service Project. Although the findings indicated that the goal of bringing about an attitude change was not achieved, impressions gained from observations made of the Project during the school year suggest that further time should be allowed to pass before a final decision is made as to the attainment of this objective.

Effectiveness of the Project

In the opinion of the Project staff, principals and teachers, all but two of the objectives prescribed for the Project were being achieved. The achievement of objectives was the criterion of

effectiveness which was established before the investigation commenced. In that most objectives were achieved, the Project was deemed to be effective.

IMPLICATIONS

Implications of the study for the theory and practice of educational administration and for the Project are given below.

Theory and Practice of Educational Administration

The instruments which were designed for this study yielded valuable information but, to obtain a more complete picture of an organization, additional measures would seem to be necessary. For example, none of the instruments used in this study measures the two very important aspects of leadership and staff dedication. In an undertaking such as the Project, leadership could be an important factor in determining the success of the enterprise. Instruments which examine various facets of leadership are available and could be adapted for use in a study of an innovation such as the Project.

An instrument which could give a measure of staff dedication may be difficult to devise but it might prove to be useful in the prediction of the success of an organization. As well as obtaining a measure of staff dedication the instrument may need measures on factors such as loyalty, motivation and personality.

Goal attainment according to the opinions of the personnel involved rather than pupil achievement was the measure of effectiveness used in this study. The instruments used yielded information which gave a broader picture of the effectiveness of the Project. If measures of

environmental diversity and the states of differentiation and integration existing within an organization were included with the measures of the more traditional aspects investigated in studies of the effectiveness of educational organizations, a more valid picture of the total effectiveness of the organization may result.

The Lawrence and Lorsch methodology could be applied when the effectiveness of a number of schools within a school system or any one school was being examined. The technique would be particularly appropriate to use in schools which have subject departments or forms of sub-units.

The technique is limited when a school does not have sub-units, but it has value in that it directs attention to aspects of the organization which might otherwise be overlooked.

When the educational organization being investigated interacts with a number of major environmental segments, as was the case with the Project, the Lawrence and Lorsch methodology is useful for indicating the demands the different environmental segments place on the organization.

The Project

Suggestions relating to the Project concern aspects which deal with the Project specifically and aspects which have wider implications.

The Board segment of the environment and the outside agency segment were seen as placing few demands on the Project staff. Potential conflict situations were seen as being unlikely to develop in these segments. Occasional meetings between the Board and the Project staff and between outside agencies and the Project staff may serve to eliminate completely any misunderstandings that might develop between the Project

staff and these groups. This step is not essential as the Project Director liaises closely with the Project staff and the Board. If necessary, a Project staff member could be assigned the duty of acting as liaison officer for the outside agencies and the Project staff.

As far as the school segment of the environment was concerned, many principals and teachers believe that the Project was spread too thinly. More financial support would appear to be essential if the Project is to offer support beyond the present level.

If money cannot be obtained to provide additional staff members and materials, the requests by principals and teachers for more concentrated service might be met by adopting the suggestion that Zone 4 be divided into two areas, A and B, and having the Project staff spend the first half of the year in area A and the last half in area B. If this step were taken the time which the Project staff are obliged at present to spend in travel would be reduced considerably.

A feature of the Project which was popular with teachers was the follow-up service provided by the Project staff. Without additional resources the only way more follow-up services could be provided would be by assisting a smaller number of students. If the decision to assist fewer students were made, problems relating to the selection of students may have to be overcome.

One of the goals which the Project has is the establishment of a central or common information filing system. To date, resources have been unable to be spared to establish this system but it is a goal to which attention should be directed.

The Report of the Commission on Educational Planning (1972:78) estimated that there were, "about 50,000 learners a year requiring

special treatment, schooling and care" in Alberta. If the Learning Assistance Service Project were to be duplicated in centers throughout Alberta it would be a means of providing the assistance which these learners require.

A province which wished to make a significant step forward in the quality of the education being provided for all children with learning disabilities in that province should consider establishing a central library of programs for learning disabled children. Teams of educational testers could travel throughout the province testing all children believed to have some form of learning disability. The results of tests taken by a child could be forwarded to a central office where specialists could devise a program which would correct the child's disability. The program, accompanied by implementing instructions, could then be forwarded to the teacher of the child. With a team of experts devising programs a library of programs could soon be established.

The need would still exist for itinerant advisors but the role of these advisors would be to assist teachers and not to carry out the initial testing or to design the programs which the responses to the items in these tests indicated were required.

The benefits a program library system could provide for any learning disabled child are many. Jurisdictions in remote areas may experience difficulties at present in providing the attention required by some learning disabled children. If such a system were to be inaugurated it could prove to be beneficial to learning disabled children served by these jurisdictions.

The Learning Assistance Field Service Project has been

appreciated by principals and teachers. The suggestion is made that the Project be extended to other areas with the eventual aim of developing a program library system such as that described above.

Recommendations for Further Research

Recommendations for further research are suggested for the Lawrence and Lorsch technique and for the Learning Assistance Field Service Project.

The The Lawrence and Lorsch technique. The methodology developed by Lawrence and Lorsch would seem to be applicable to the study of educational organizations. Administrators in schools or school jurisdictions concerned with improving the effectiveness of schools should be encouraged to consider using the Lawrence and Lorsch technique to examine school systems.

Further research of organizations in education should be undertaken. Measures of leadership and staff dedication should be included with the measures of environmental diversity, and organizational differentiation and integration.

The Learning Assistance Field Service Project. Research involving the improved performance of pupils who have been assisted by the Project is being undertaken and should be continued.

Comparisons are being made between the effectiveness of the Learning Assistance Field Service Project and the Project being conducted in Grande Prairie in Alberta. Comparisons should also be made between the Project and any other scheme introduced to assist learning disabled children. These comparisons should be made with the aim of determining the best method of offering assistance to learning

disabled children and their teachers.

Within the Learning Assistance Field Service Project each staff member could be encouraged to use a different method of implementing the Project. If sufficient controls could be established and if pupils assisted by each staff member could be matched perfectly, a study which may have value would be to determine which technique of Project implementation provided the greatest assistance to pupils and teachers. This particular technique could then be adopted by all Project staff members and used by all other specialists if the Project were to be extended to other localities.

The attitude measuring instrument did not detect a change in the attitude of teachers toward learning disabled children or toward projects similar to the Learning Assistance Field Service Project. If the instrument were to be administered at the end of the next school year, that is, in May, 1975, a change in attitude might be detected.

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A P P E N D I C E S

APPENDIX A

OBJECTIVES OF THE LEARNING ASSISTANCE
FIELD SERVICE PROJECT

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OBJECTIVES OF THE LEARNING ASSISTANCE
FIELD SERVICE PROJECTTerminal Objectives (pupil outcomes)A. Affective.

Improvement in

1. Self-concept
2. Self-concept as a learner
3. Attitudes toward
 - teachers
 - specific aspects of school
 - reading
 - arithmetic
 - peers
 - etc.

B. Cognitive.

Improvement in

1. Reading
 - i) Specific basic skills.
 - ii) Comprehension skills.
2. Arithmetic
 - i) Basic concepts and skills.
 - ii) Problem solving.

C. Improvement in Behavior.

1. Reduced incidence of deviant behavior.

Terminal Objectives (teacher outcomes)A. Affective.

Improvement in

1. Attitude toward disabled learners.
2. Optimism that a structured program will assist disabled learners.
3. Attitude toward the LAFS type of support program.

B. Cognitive.

Increase in

1. Knowledge concerning learning handicaps.
2. Knowledge concerning specific methods, materials and activities of use in diagnostic, prescription and remediation.
3. Knowledge concerning sources and types of assistance.
4. Knowledge of relevance to parents with learning disabled children.

C. Behavioral.

Teachers will be observed

1. Implementing activities related to diagnosis, prescription and remediation of learning disabilities.
2. Implementation of other activities characteristic of the LAFS program: criterion-referenced measurement and recording; task analysis of academic and social development programs; contingency management in the classroom; individualizing instruction, and communicating with professionals from outside agencies.

Enabling Objectives.A. Administrative.

1. Development of policies by the Central Alberta Regional School District board of trustees.
2. Development of regulations, routines and attention to procedural details by the Director and staff within board policy.
3. Communication with referent groups concerning project goals, policies and the nature of the support services.

B. Support Services.

LAFS personnel and school system personnel will relate to outside agencies and professionals in these ways:

1. Communication.
2. Articulation of programs. Duplication is avoided. (The Provincial Guidance Clinics, Health Units, Glenrose Mobile Clinic and local psychologists and medical personnel--for example--will fill the void relative to mental health diagnosis and prescription and health and sensory needs.)
3. Establishment of a central or common information filing system.

C. Instruction.

I. General: The LAFS team will

1. attempt to maximize the distribution of services by focusing upon the larger proportions of learning disabled children found in regular classrooms and who typically would benefit from specialized programs (as opposed to supplementing existing services to handicapped children in special classrooms. Local arrangements will dictate the amount of service provided Special Class teachers.
2. operate within the framework of a behavioral model of instruction in the basic skills which emphasizes the functional relationships of teaching behavior, learning environments, and pupil performance. Subsumed here are activities such as: task analysis of the reading, language and arithmetic programs; application of the mastery learning concept with its expectation that nearly all children will achieve certain basic and crucial skills; criterion-referenced measurement to establish baseline and feedback information; diagnosis, prescription and remediation which are task-centred; and application of behavior modification reinforcement principles in facilitating social-emotional development as well as the academic tasks of the school

II. Diagnosis and prescription

The LAFS team will provide service and/or assist teachers in

1. using diagnostic instruments that relate to reading and arithmetic skills and in monitoring classroom behavior.
2. identifying and analyzing task/skill hierarchies in the basic skill areas,
3. developing individualized programs consistent with diagnostic findings and the tasks assigned by the school (the program developed and materials used matches the strengths/deficits of of the individual child).

III. Materials, media and technology

The LAFS team will provide service and/or assist teachers in

1. the identification and procurement of instructional materials and media appropriate to individualization of instruction for children identified as learning disabled,
2. the design, application, evaluation, and modification of teaching routines and learning environments appropriate to individualization of instruction in the basic skills.
(Objectives of the Learning Assistance Field Service, circa 1972:3-5)

APPENDIX B

LETTER FROM DR. JAY W. LORSCH

HARVARD UNIVERSITY
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
GEORGE F. BAKER FOUNDATION

JAY W. LORSCH

Professor of Organizational Behavior

SOLDIERS FIELD

BOSTON, MASSACHUSETTS 02163

April 2, 1974

Ian Fraser
Department of Educational Administration
855 General Services Building
The University of Alberta
Edmonton
Alberta
Canada T6G 2E1

Dear Mr. Fraser:

I would have no objection to your using the instruments in the methodological appendix of our book, ORGANIZATION AND ENVIRONMENT, in your dissertation, and I wish you the best of luck.

Sincerely,



Jay W. Lorsch

JLW:svvc

APPENDIX C

ENVIRONMENT INTERVIEW SCHEDULE

APPENDIX C

ENVIRONMENT INTERVIEW SCHEDULE

Please place a cross through the appropriate numeral.

- 1.1 Have the duties which you are expected to carry out in relation to the Central Alberta Board been made clear to you?

1	2	3	4	5
Very clear		Moderately		Not clear

- 1.2 How clear are you as far as what is expected of you in relation to schools and students?

1	2	3	4	5
Very clear		Moderately		Not clear

- 1.3 How clear are you as far as what is expected of you in relation to outside agencies?

1	2	3	4	5
Very clear		Moderately		Not clear

- 2.1 What degree of difficulty do you experience from Board Members when you endeavor to introduce a program?

1	2	3	4	5
None		Moderate		Considerable

- 2.2 How difficult is it for you to develop a remedial program for a child which is readily accepted by a teacher?

1	2	3	4	5
Not difficult		Moderately		Very difficult

- 2.3 How difficult is it for you to utilize the recommendations made by an outside agency in a remedial program you develop for a child?
(Consider time spent waiting for a report or obtaining a report as part of the difficulty)

1	2	3	4	5
Not difficult		Moderately		Very difficult

3.1 If you have a question which requires board consideration, for what length of time do you usually wait for an answer?

1 week 2 weeks 3 weeks 4 weeks 5 weeks+

3.2 What is the typical length of time you wait before you receive feedback from a teacher informing you of the success of a remedial program you have suggested?

3 weeks 4 weeks 5 weeks 6 weeks 7 weeks+

3.3 What is the typical length of time you wait before a report is available from an outside agency on a child you have referred to that agency?

1 week 2 weeks 3 weeks 4 weeks 5 weeks+

4.2 For approximately how many teachers have you provided assistance this year? (If more than one child in a class has been treated count the additional children as additional teachers. Count all teachers who have attended in-service courses at which you have spoken. Count all teachers who have been assisted directly by a teacher trained by you.)

20- 40 60 100 100+

4.3 How many referrals have you made to outside agencies or to one of the other specialists?

3- 6 9 12 15+

5.2 Apart from those teachers with whom you have worked directly, how many requests (from other teachers, principals, parents) have you had for assistance or information?

10- 20 30 40 50+

5.3 How many additional children would you like to have referred to outside agencies?

10 20 30 40 50+

6.1 How many direct or relayed criticisms (except those relating to the limited time spent with teachers and the limited number of children seen) have you heard about the Project from Board Members?

2- 6 10 14 20+

6.2 How many such criticisms have you heard from Principals and Teachers?

10 20 30 40 50

6.3 How many direct or relayed criticisms have you heard from outside agencies about the fact that they are involved with the Project?

2- 6 10 14 20+

7.1 To what degree do Board Members endeavor to influence your mode of operation?

1 2 3 4 5
Very Low Moderate Very High

7.2 To what degree to principals and teachers endeavor to influence your mode of operation?

1 2 3 4 5
Very Low Moderate Very High

7.3 To what degree do outside agencies endeavor to influence your mode of operation?

1 2 3 4 5
Very Low Moderate Very High

8.1 How frequently do you have to change your daily/weekly plan because of unpredictable events generated by Board Members?

1 2 3 4 5
Very Rarely Sometimes Very Frequently

8.2 How frequently do you have to change your daily/weekly plan because of unpredictable events generated by principals and/or teachers?

1 2 3 4 5
Very Rarely Sometimes Very Frequently

8.3 How frequently do you have to change your daily/weekly plan because of unpredictable events generated by outside agencies?

1 2 3 4 5
Very Rarely Sometimes Very Frequently

APPENDIX D

DIFFERENTIATION INTERVIEW SCHEDULE

APPENDIX D

DIFFERENTIATION QUESTIONNAIRE

1.1 How frequently are reviews of Project performance held?

Less than once each month	Monthly	Every two weeks	Weekly
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1.2 How specific are these reviews of Project performance?

General oral review	General written review	One or more general statistics	Detailed statistics
------------------------	---------------------------	--------------------------------------	------------------------

1.3 Are there any formal rules of procedure which you must follow when dealing with Project concerns?

No rules	Rules on minor routine procedures	Comprehensive rules on routine procedures and/ or limited rules on operations	Comprehensive rules of all routine pro- cedures and operations
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1.4 How specific are evaluations of your activities?

No formal evaluation	Formal evaluation - no fixed criteria	Formal evaluation - less than five criteria	Formal eval- uation - detailed criteria - more than five
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2. Setting aside the long-term objectives of the Project of improving the learning abilities of children and the development of teacher skills of recognizing and assisting learning disabled children, what percentage of your time is devoted to activities (testing, teacher assistance, program preparation, collection of resource materials, in-service work etc.) the results of which will be evident within:

1 day to 1 week
1 week to 2 weeks
2 weeks to 1 month
1 month to 2 months
6 months or longer

100%

3. The following goal statements are based on some of the terminal objectives prescribed for the Project. Please rank these goals in order of importance. (Assign a rank of 1 to the most important goal.)

Rank

- _____ To establish in conjunction with outside agencies a central or common information filing system on disabled learners.
- _____ Extend the ability of the teacher to implement activities related to diagnosis, prescription and remediation of learning disabilities.
- _____ Improve the reading and arithmetic skills of the child.
- _____ Put into effect policies established by the Board.
- _____ Bring children with particular learning disabilities to the knowledge of those outside agencies who can help.
- _____ Increase the teacher's knowledge about handicaps to learning in children.
- _____ Work with outside agencies in preparing programs for learning disabled children.
- _____ Reduce the incidence of deviant behavior in pupils.
- _____ Establishment of a routine for Project Staff for assisting teachers of disabled learners.
- _____ Dissemination of information about Project goals and policies and the nature of the support service.

APPENDIX E

INTERVIEW SCHEDULE FOR
BOARD-PROJECT INTEGRATION

APPENDIX E

INTERVIEW SCHEDULE FOR BOARD - PROJECT INTEGRATION

With what regularity might the following situations occur?

How might these problems be resolved?

Please indicate the frequency of occurrence by placing a cross through the appropriate numeral. The numerals indicate frequency as:

1. Very rarely (VR)
2. Rarely (R)
3. Sometimes (S)
4. Frequently (F)
5. Very Frequently (VF)

1. Board Members ask you to spend more of your time in their schools and/or to supply more materials.

1	2	3	4	5
VR	R	S	F	VF

2. Board Members give directives or rulings as to actions to be taken or procedures to be followed when assisting teachers or pupils.

1	2	3	4	5
VR	R	S	F	VF

3. -

4. The Board establishes policies which are based on values and beliefs to which you do not fully subscribe.

1	2	3	4	5
VR	R	S	F	VF

5. An open or felt difference of opinion with Board Members over who should direct the Project in schools.

1	2	3	4	5
VR	R	S	F	VF

6. -

7. -

8. You encounter or learn of Board Members who have different task expectations for you from those that you believe are associated with your role. - e.g. they expect you to carry out the remedial work with the child rather than design a remedial program for teachers to follow.

1	2	3	4	5
VR	R	S	F	VF

9. What sort of a relationship do you believe exists generally between the Project staff and the Board?

10. What suggestions can you give which, if implemented, might lead to an improvement in the working relations between Project staff and the Board?

APPENDIX F

INTERVIEW SCHEDULE FOR
SCHOOL-PROJECT INTEGRATION

APPENDIX F

INTERVIEW SCHEDULE FOR SCHOOL - PROJECT INTEGRATION

With what regularity might the following situations occur?

How might these problems be resolved?

Please indicate the frequency of occurrence by placing a cross through the appropriate numeral.

1. Very rarely. (VR)
2. Rarely. (R)
3. Sometimes (S)
4. Frequently (F)
5. Very frequently (VF)

1. Principals and/or teachers ask you for more of your time and/or more materials.

1	2	3	4	5
VR	R	S	F	VF

2. Principals give directions or rulings as to actions to be taken or procedures to be followed in their schools.

1	2	3	4	5
VR	R	S	F	VF

3. Teachers are not in agreement with the procedures you suggest or do not carry out a program in the manner which you recommend.

1	2	3	4	5
VR	R	S	F	VF

4. Principals and/or teachers, because they appear to hold different values and beliefs, have established a priority of educational goals which is not in accordance with the educational goals of the Project. This prevents them from accepting the program which you recommend.

1	2	3	4	5
VR	R	S	F	VF

5. You believe that a teacher shows some hesitancy in accepting a program which you recommend because the teacher believes that he has the right to conduct his class in any way that he chooses.

1	2	3	4	5
VR	R	S	F	VF

6. You believe that a teacher does not accept readily the advice you offer because he is uncertain of your role and your status within the school system.

1	2	3	4	5
VR	R	S	F	VF

7. You experience difficulty in communicating with a teacher because of what you believe are personality differences or other barriers which might be termed "psychological".

1	2	3	4	5
VR	R	S	F	VF

8. You assist teachers who have different task expectations for you from those which you believe to be associated with your role e.g. they expect you to carry out the remedial work with the child rather than to give them a program which they are to follow.

1	2	3	4	5
VR	R	S	F	VF

APPENDIX G

INTERVIEW SCHEDULE FOR
OUTSIDE AGENCY-PROJECT INTEGRATION

APPENDIX G

INTERVIEW SCHEDULE FOR OUTSIDE AGENCY - PROJECT INTEGRATION

With what regularity might the following situations occur?

How might these problems be resolved?

Please indicate the frequency of occurrence by placing a cross through the appropriate numeral. The numerals indicate frequency as:

1. Very rarely (VR)
2. Rarely (R)
3. Sometimes (S)
4. Frequently (F)
5. Very frequently (VF)

1. You experience difficulty in getting outside agencies to see pupils because of the other commitments these agencies have.

1	2	3	4	5
VR	R	S	F	VF

2. You experience difficulty in getting outside agencies to see pupils and to supply reports because of the rules and procedures these agencies have.

1	2	3	4	5
VR	R	S	F	VF

3. Outside agencies do not carry out the tests which you request and/or carry out other tests which you do not require.

1	2	3	4	5
VR	R	S	F	VF

4. Outside agencies appear to have goals and objectives which they place before the needs of the pupils whom you refer to them.

1	2	3	4	5
VR	R	S	F	VF

5. You believe that an outside agency shows some hesitancy in carrying out the testing you request because the outside agency considers that it has the right to select the tests it will give and the time when it will give them.

1	2	3	4	5
VR	R	S	F	VF

6. You believe that outside agencies do not comply readily with requests because they are uncertain of your role and your status in relation to them.

1	2	3	4	5
VR	R	S	F	VF

7. You experience difficulty in communicating with an outside agency because of what you believe are personality differences or other barriers which might be termed "psychological".

1	2	3	4	5
VR	R	S	F	VF

8. You meet outside agencies who have different task expectations for you from those which you believe to be associated with your role - e.g. and outside agency believes that you should carry out the testing you have asked the agency to do.

1	2	3	4	5
VR	R	S	F	VF

APPENDIX H

QUESTIONS FOR TEACHERS ASSOCIATED WITH THE LEARNING ASSISTANCE FIELD SERVICE PROJECT

APPENDIX H

QUESTIONS FOR TEACHERS ASSOCIATED WITH THE LEARNING
ASSISTANCE FIELD SERVICE PROJECT

(As the responses of all teachers will be grouped, no provision has been made for you to place your name on this questionnaire. This should ensure that individual responses remain confidential.)

Please estimate the strength of your opinion about each question by placing a cross through the appropriate numeral.

The numerals indicate strength of feeling as:

1. Very low or not at all.
2. Low.
3. Moderate.
4. High.
5. Very High.

If a particular statement does not apply to you, i.e. you have not discussed that particular aspect with a Project Staff Member, please place a cross in the space provided.

In general, the first nine questions are based on goals stated for the Learning Assistance Field Service Project.

Your responses to the following questions should be based on your association with the Learning Assistance Field Service Project.

DIAGNOSIS AND PRESCRIPTION

1. To what degree do you believe that you have increased your knowledge of the use of diagnostic instruments that relate to reading and/or arithmetic skills?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

2. To what degree do you believe that you have been assisted in the diagnosing and/or monitoring of the classroom behavior of children?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

3. To what degree do you believe that you have been assisted in analysing task/skill hierarchies in the basic skill areas?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

MATERIALS, MEDIA AND TECHNOLOGY

4. To what degree have you been directed to or provided with instructional materials and/or media appropriate to the individualization of instruction?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

5. To what degree have you been assisted in the design of teaching routines appropriate to the individualization of instruction in the basic skills?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

BEHAVIOR MANAGEMENT

6. To what degree have you been assisted with the design of programs for modification of deviant behavior in children?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

7. To what degree have you been assisted by Project staff members with follow-up activities for children with emotional and/or health problems who have been referred to other professionals?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

IN SERVICE

8. To what degree have you been assisted by in-service programs in diagnosing the educational problems of the pupil?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

9. To what degree have you been assisted by in-service programs in constructing and implementing programs designed to correct the educational problems of the pupil?

Not applicable in my case.

1	2	3	4	5
Very Low		Moderate		Very High

10. To what degree are you in favor of having a group in-service program conducted by all Project staff members in preference to individual assistance from one Project staff member?

1	2	3	4	5
Very Low		Moderate		Very High

OTHER QUESTIONS

11. To what degree do you think that the Project is helping to meet the needs of the learning disabled children in your classroom.

1	2	3	4	5
Very Low		Moderate		Very High

12. What is the degree of duplication of services provided by the Learning Assistance Field Service Project and services provided by other groups? (e.g. through the Educational Opportunity Fund and/or through activities organized by the School District to which your school belongs.)

1 2 3 4 5
Very Low Moderate Very High

13. To what degree are you in favor of the Project continuing with its present mode of operation in preference to some other mode?

1 2 3 4 5
Very Low Moderate Very High

14. To what degree do programs designed to assist learning disabled children lose their effectiveness because suitable materials are not available?

1 2 3 4 5
Very Low Moderate Very High

15. In your opinion, what are the best features of the Project?

16. On which aspects of the Project would you like to see Project staff members concentrate their attention?

17. Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?

Please add any other comments you would like to make about the Project.

Thank you for your cooperation and assistance.

APPENDIX I

QUESTIONS FOR PRINCIPALS OF SCHOOLS PARTICIPATING IN THE
LEARNING ASSISTANCE FIELD SERVICE PROJECT

APPENDIX I

QUESTIONS FOR PRINCIPALS OF SCHOOLS PARTICIPATING IN THE
LEARNING ASSISTANCE FIELD SERVICE PROJECT

(As the responses of all principals will be grouped, no provision has been made for you to place your name on the questionnaire. This should ensure that individual responses remain confidential.)

Please estimate the strength of your opinion about each question by placing a cross through the appropriate numeral.

The numerals indicate strength of feeling as:

1. Very low or not at all.
2. Low.
3. Moderate.
4. High.
5. Very High.

If a particular statement does not apply to your school, i.e. no teacher in your school has received that type of assistance from a Project staff member, please place a cross in the space provided.

In general, the first nine questions are based on goals stated for the Learning Assistance Field Service Project.

Your responses to the following questions should be based on your impression of the Learning Assistance Field Service Project and the assistance it has provided for teachers in your school.

DIAGNOSIS AND PRESCRIPTION

1. To what degree do you believe that teachers in your school have increased their knowledge of the use of diagnostic instruments that relate to reading and/or arithmetic skills?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

2. To what degree do you believe that teachers in your school have been assisted in the diagnosing and/or monitoring of the classroom behavior of children?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

3. To what degree do you believe that teachers in your school have been assisted in analysing task/skill hierarchies in the basic skill areas?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

MATERIALS, MEDIA AND TECHNOLOGY

4. To what degree have teachers in your school been directed to or provided with instructional materials and/or media appropriate to the individualization of instruction?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

5. To what degree have teachers in your school been assisted in the design of teaching routines appropriate to the individualization of instruction in the basic skills?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

BEHAVIOR MANAGEMENT

6. To what degree have teachers in your school been assisted with the design of programs for the modification of deviant behavior in children?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

7. To what degree have teachers in your school been assisted by Project staff members with follow-up activities for children with emotional and/or health problems who have been referred to other professionals?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

IN-SERVICE

8. To what degree have teachers in your school been assisted by in-service programs in diagnosing the educational problems of the pupil?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

9. To what degree have teachers in your school been assisted by in-service programs in constructing and implementing programs designed to correct the educational problems of the pupil?

Not applicable to this school.

1	2	3	4	5
Very Low		Moderate		Very High

10. To what degree are you in favor of having a group in-service program conducted by all Project staff members in preference to individual assistance from one Project staff member?

1	2	3	4	5
Very Low		Moderate		Very High

OTHER QUESTIONS

11. To what degree do you think that the Project is helping to meet the needs of the learning disabled children in your school?

1	2	3	4	5
Very Low		Moderate		Very High

12. What is the degree of duplication of services provided by the Learning Assistance Field Service Project and services provided by other groups? (e.g. through the Educational Opportunity Fund and/or through activities organized by the School District to which your school belongs.)

1	2	3	4	5
Very Low		Moderate		Very High

13. To what degree are you in favor of the Project continuing with its present mode of operation in preference to some other mode?

1	2	3	4	5
Very Low		Moderate		Very High

14. To what degree do programs designed to assist learning disabled children lose their effectiveness because suitable materials are not available?

1	2	3	4	5
Very Low		Moderate		Very High

15. In your opinion, what are the best features of the Project?

16. On which aspects of the Project would you like to see Project staff members concentrate their attention?

17. Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?

Please add any other comments you would like to make about the Project.

Thank you for your cooperation and assistance.

APPENDIX J

GOAL ACHIEVEMENT QUESTIONNAIRE
FOR L.A.F.S. PROJECT STAFF

APPENDIX J

GOAL ACHIEVEMENT QUESTIONNAIRE FOR L.A.F.S. PROJECT STAFF

In general, the first seventeen questions are based on goals stated for the Learning Assistance Field Service Project.

Please estimate the strength of your opinion about each question by placing a cross through the appropriate numeral. The numerals indicate strength of feeling as:

1. Very low or not at all.
2. Low.
3. Moderate.
4. High.
5. Very High.

ADMINISTRATION

1. To what degree do you believe that the Board has developed policies which, given the limitations of time, resources and school involvment, Project staff have been able to implement?

1	2	3	4	5
Very low		Moderate		Very High

2. To what degree do you believe that Project staff members have been able to develop regulations and routines for the administration of the Project according to Board policy?

1	2	3	4	5
Very low		Moderate		Very High

3. To what degree do you believe that you have been successful in passing on information (to those who have asked) about Project goals, policies and the nature of the support service?

1	2	3	4	5
Very low		Moderate		Very High

SUPPORT SERVICES

4. To what degree are you satisfied with the communication which has

existed between you and the outside agencies?

1	2	3	4	5
Very Low		Moderate		Very High

5. In the case of referrals made to outside agencies, to what degree are you satisfied with the service provided? (Waiting time for cases to be examined, availability of reports, usefulness of reports, programs recommended.)

1	2	3	4	5
Very Low		Moderate		Very High

6. What degree of success has been achieved in the establishing with outside agencies of a central or common information filing system?

1	2	3	4	5
Very Low		Moderate		Very High

DIAGNOSIS AND PRESCRIPTION

7. To what degree do you believe that you have contributed to the knowledge of teachers about the use of diagnostic instruments that relate to reading and/or arithmetic skills?

1	2	3	4	5
Very Low		Moderate		Very High

8. To what degree do you believe that you have assisted teachers in the diagnosing and/or monitoring of the classroom behavior of children?

1	2	3	4	5
Very Low		Moderate		Very High

9. To what degree do you believe that you have assisted teachers in identifying and/or analysing task/skill hierarchies in the basic skill areas?

1	2	3	4	5
Very Low		Moderate		Very High

10. To what degree do you believe that you have assisted teachers in the development for learning disabled children, of individualized programs which are consistent with diagnostic findings and with tasks assigned by the school?

1	2	3	4	5
Very Low		Moderate		Very High

MATERIALS, MEDIA AND TECHNOLOGY

11. To what degree have you been able to assist teachers by directing them to or providing them with, instructional materials and/or media

appropriate to the individualization of instruction?

1	2	3	4	5
Very low		Moderate		Very High

12. To what degree have you been able to assist teachers in the design, application, evaluation, and modification of teaching routines and learning environments appropriate to the individualization of instruction in the basic skills?

1	2	3	4	5
Very Low		Moderate		Very High

BEHAVIOR MANAGEMENT

13. To what degree have you been able to assist teachers in the identification and specification of educationally relevant behavior management problems?

1	2	3	4	5
Very Low		Moderate		Very High

14. To what degree have you been able to assist teachers with the design, implementation and evaluation of programs for modification of deviant behavior in children?

1	2	3	4	5
Very Low		Moderate		Very High

15. To what degree have you been able to assist teachers with follow-up activities for children with emotional or health problems who have been referred to other professionals?

1	2	3	4	5
Very Low		Moderate		Very High

IN SERVICE

16. To what degree have in-service activities in which you have participated or which you have organized assisted teachers in diagnosing the educational problems of the pupil?

1	2	3	4	5
Very Low		Moderate		Very High

17. To what degree have in-service activities in which you have participated or which you have organized assisted teachers in constructing and implementing programs designed to correct the educational problems of the pupil?

1	2	3	4	5
Very Low		Moderate		Very High

18. To what degree are you in favor of having group in-service programs conducted by all specialists in preference to providing assistance for individual teachers.

1	2	3	4	5
Very Low		Moderate		Very High

OTHER QUESTIONS

19. To what degree, so far, do you think that the Project is helping to meet the needs of learning disabled children?

1	2	3	4	5
Very Low		Moderate		Very High

20. To what degree do you find that there is a duplication of the assistance that you provide and the assistance being provided through the E.O.F. and through other education specialists employed by the school district?

1	2	3	4	5
Very Low		Moderate		Very High

21. To what degree are you in favor of the Project continuing with its present mode of operation?

1	2	3	4	5
Very Low		Moderate		Very High

22. To what degree are you limited by the unavailability of suitable materials when designing programs to assist teachers of learning disabled children?

1	2	3	4	5
Very Low		Moderate		Very High

23. How much time is required for essential record keeping?

1	2	3	4	5
Very Low		Moderate		Very High

24. In your opinion, what are the best features of the Project?

25. On which aspects of the Project do you think that Project staff members should concentrate their attention?

26. Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?

27. With which aspects of Board operation and policy are you not in favor?
28. Assuming the same level of resources, what could you suggest that might improve Board operation and/or Board - Project staff understanding?
29. What are the most successful features of the services provided by outside agencies for the Project?
30. In what ways could the use of and/or service provided by outside agencies possibly be improved?

APPENDIX K

LETTER TO PRINCIPALS OF SCHOOLS PARTICIPATING
IN THE PROJECT

APPENDIX K

LETTER TO PRINCIPALS OF SCHOOLS PARTICIPATING IN THE PROJECT

Department of Educational Administration,
Education Building,
The University of Alberta,
Edmonton. Alberta. T6G 2E1

April 16, 1974.

Dear

The Learning Assistance Field Service Project to assist disabled learners has operated in Zone 4 during the 1973 - 74 school year. Although the Project will continue during the 1974 - 75 school year, an effort is being made at this stage to learn whether the Project is achieving its goals. This is being done by asking principals and teachers for their impressions of the Project.

As your school has participated in the Project, your opinion of the value of the assistance provided is important to the evaluation. If you will be kind enough to answer the questions on the attached pages and return the questionnaire in the envelope provided by Wednesday, 8th May, 1974, I shall be most grateful.

Thank you for your assistance.

Yours sincerely,

Ian Fraser

APPENDIX L

LETTERS TO TEACHERS ASSISTED BY
THE PROJECT STAFF

APPENDIX L

LETTER TO TEACHERS ASSISTED BY THE PROJECT STAFF

Department of Educational Administration,
Education Building,
The University of Alberta,
Edmonton. Alberta. T6G 2E1.

April 16, 1974.

Dear

The Learning Assistance Field Service Project to assist disabled learners has operated in Zone 4 during the 1973 - 74 school year. Although the Project will continue during the 1974 - 75 school year, an effort is being made at this stage to learn whether the Project is achieving its goals. This is being done by asking principals and teachers for their impressions of the Project.

As your school has participated in the Project, your opinion of the value of the assistance provided is important to the evaluation. If you will be kind enough to answer the questions on the attached pages and return the questionnaire in the envelope provided by Wednesday, 8th May, 1974, I shall be most grateful.

Thank you for your assistance.

Yours sincerely,

Ian Fraser

APPENDIX M

LETTER TO TEACHERS PARTICIPATING IN THE
ATTITUDE MEASUREMENT SURVEY

APPENDIX M

LETTER TO TEACHERS PARTICIPATING IN THE
ATTITUDE MEASUREMENT SURVEY

Department of Educational Administration,
General Services Building,
The University of Alberta,
Edmonton, Alberta.

November 27, 1973.

Dear

This year, your school is participating in a Learning Assistance Project being conducted by Central Alberta Regional School District Number Three.

The success of the Project will be determined in a number of ways. A group of teachers will be contacted with a view to learning their opinions about the Project, but the intention is to trouble teachers generally as little as possible.

One aspect that is of interest is the attitudes held by teachers toward various concepts believed to be associated with the Project. A technique which has been used to measure attitudes is the semantic differential. Researchers have found that an indication of people's attitudes towards particular concepts can be obtained from the responses that these people make to various adjective pairs.

If you would spare me some of your time and respond to the adjective pairs used to describe the concepts on the following pages I shall be most grateful.

To ensure that all returns remain confidential, no provision has been made for you to place your name on the measure.

When the measure has been completed, would you please mail it in the envelope provided.

Thank you for your cooperation and assistance.

Yours faithfully,

APPENDIX N

ATTITUDE MEASURING INSTRUMENT

ATTITUDE MEASURING INSTRUMENT

You are asked to consider the concepts at the top of the following pages and then to indicate your feeling about the concept in relation to each of the adjective pairs listed beneath the concept by circling the appropriate numeral.

An example, consider the concept, "MUSICAL COMEDY," and the adjective pairs, "ROUGH--SMOOTH," "DULL--SHARP," "STRONG--WEAK" and "CLEAR--HAZY." A person's response to the adjective pair, "ROUGH--SMOOTH" might be:

ROUGH 1 2 3 4 5 ⑥ 7 SMOOTH

as a "MUSICAL COMEDY" is thought of as being almost completely "SMOOTH" rather than "ROUGH."

The adjective pair, "DULL--SHARP" might result in:

DULL 1 2 3 4 ⑤ 6 7 SHARP

as a "MUSICAL COMEDY" is thought of as being more "SHARP" than "DULL."

The adjective pair, "STRONG--WEAK" might lead to the response:

STRONG ① 2 3 4 5 6 7 WEAK

as a "MUSICAL COMEDY" is considered to be "STRONG."

The adjective pair "CLEAR--HAZY" may not suggest any feeling in either direction as far as a "MUSICAL COMEDY" is concerned and the numeral 4 would be circled as below:

CLEAR 1 2 3 ④ 5 6 7 HAZY

Now please consider the concepts which follow and circle the numeral which best describes your feeling toward the particular concept as evoked by each adjective pair.

Concept: SOCIALLY MALADJUSTED STUDENT

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: LEARNING ASSISTANCE PROJECT

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: STUDENT WITH SPEECH OR HEARING PROBLEM

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: CENTRALLY LOCATED TEACHER-ADVISOR WHO TRAVELS
FROM SCHOOL TO SCHOOL

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: LEARNING DISABLED STUDENT

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: PROGRAM WHICH PROVIDES MATERIALS AND SUGGESTIONS
FOR TEACHERS OF LEARNING DISABLED STUDENTS

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: ACTIVITIES FINANCED THROUGH THE EDUCATIONAL
OPPORTUNITY FUND (E.O.F.)

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

Concept: STUDENT WITH POOR READING ABILITY

ORDERED	1	2	3	4	5	6	7	CHAOTIC
UNPLEASANT	1	2	3	4	5	6	7	PLEASANT
SHARP	1	2	3	4	5	6	7	DULL
THIN	1	2	3	4	5	6	7	THICK
STRONG	1	2	3	4	5	6	7	WEAK
FAIR	1	2	3	4	5	6	7	UNFAIR
NOT ACTIVE	1	2	3	4	5	6	7	ACTIVE
CLEAR	1	2	3	4	5	6	7	HAZY
ROUGH	1	2	3	4	5	6	7	SMOOTH
VAGUE	1	2	3	4	5	6	7	PRECISE

In order that responses may be grouped, would you kindly supply the following information by placing an "X" in the appropriate box.

1. Years of teaching? ☐ 0 - 5 ☐ 6 - 10 ☐ 11 +
2. Sex? ☐ M ☐ F
3. This year, are you teaching for 30 minutes or more each week a special or remedial class or children in an opportunity class? ☐ YES ☐ NO
4. This year, are you teaching in a regular class or classroom and having less than 30 minutes teaching contact with children in a special or remedial class or in an opportunity class? ☐ YES ☐ NO
5. This year, are you teaching in a situation other than those mentioned in questions 4 and 5 above? ☐ YES ☐ NO
6. Have you taken a course or courses of at least 30 hours' duration relating to special education? (For example, Remediation techniques, Diagnosing learning difficulties) ☐ YES ☐ NO
7. Has any child who is in a class taught by you had individual contact with a Member of the Learning Assistance Project Staff?
☐ UNCERTAIN ☐ YES ☐ NO
8. Do you expect that any child in a class taught by you will have individual contact with a Member of the Learning Assistance Project Staff during the 1973-74 school year? ☐ UNCERTAIN ☐ YES ☐ NO

THANK YOU

APPENDIX O

LETTERS TO TEACHERS PARTICIPATING
IN THE ATTITUDE MEASURING SURVEY
IN MAY, 1974.

APPENDIX O

SECOND LETTER TO TEACHERS PARTICIPATING
IN THE ATTITUDE MEASURING SURVEY

Department of Educational Administration,
Education Building,
The University of Alberta,
Edmonton. Alberta. T6G 2E1.

April 18, 1974.

Dear

The Learning Assistance Field Service Project designed to assist disabled learners in schools in Zone 4 in Alberta has been in progress for almost one school year. In April and May of this year, teachers who have had direct contact with the Project and principals of all schools associated with the Project will be asked for their opinions regarding its success.

During November, 1973, I wrote to you asking whether you could assist in the measurement of attitudes shown toward concepts believed to be related to the Project by completing a measurement instrument. A report of the first administration of the instrument has been prepared and will be forwarded to you with the report of the second stage in June, 1974.

In an endeavor to learn whether there has been a change in attitude, I would be most grateful if you could spare me more of your time and complete the instrument again. (The instrument has been posted to all teachers who were contacted in November, and to those teachers who are not associated with the Project but who also completed the instrument at that time.) It would be appreciated if you could kindly return the completed instrument in the envelope provided, by Wednesday, May 8, 1974.

A number of teachers indicated that some of the adjective pairs used in the instrument appeared to be irrelevant. Comments from teachers were most helpful, but rather than raise problems of comparability the original adjective pairs have been retained.

I am anxious not to impose too much on the time of any teacher and do not intend to ask you questions about the operation of the Project, but if you wish to add any comments about the Project I shall be most interested to read them.

Thank you for your co-operation and assistance.

Yours sincerely,

APPENDIX O

LETTER TO CONTROL GROUP PARTICIPATING IN THE
ATTITUDE MEASURING SURVEY

Department of Educational Administration,
Education Building,
The University of Alberta,
Edmonton. Alberta. T6G 2E1

April 18, 1974.

Dear

In November, 1973, you kindly agreed to be a member of a control group in an attitude measuring survey and completed a measurement instrument. The survey was concerned with attitudes toward disabled learners held by teachers associated with a Learning Assistance Field Service Project operating in Zone 4 in Alberta.

Teachers who are associated with the Project and who were asked to complete the instrument last November, have been asked to complete the instrument again. The responses of a control group will enable comparisons to be made. Therefore, I am asking you for your assistance and hope that you will be kind enough to complete the instrument again, and to mail it in the envelope provided, by Wednesday, May 8, 1974.

Reports of both stages of the survey will be forwarded to you in June, 1974.

I am most grateful for your co-operation.

Yours sincerely,

Ian Fraser

APPENDIX P

DETERMINATION OF W VALUE FOR
GOAL ORIENTATION

APPENDIX P

DETERMINATION OF W VALUE FOR GOAL ORIENTATION

The rankings assigned to each goal statement by the seven Project staff members (shown as C1, C2, C3, C4, C5, C6, and C7) are given below.

Goal statements	C1	C2	C3	C4	C5	C6	C7
1	8.5	8	9	9	10	9	9
2	1	2	2	1	2	1	1
3	2	1	1	2	1	3	3
4	8.5	10	8	10	9	10	10
5	5	6	6	6	3	5	4
6	3	3	3	3	5	2	2
7	6	7	7	5	4	6	5
8	4	4	4	7	6	4	7
9	8.5	5	5	4	7	8	6
10	8.5	9	9	8	8	7	8

Kendall's coefficient of concordance, W, may be calculated from

the formula

$$W = \frac{S}{\frac{1}{12} \cdot k^2 \cdot (N^3 - N)}$$

where $s = \left[\frac{\text{The sum of all ranks assigned to a goal statement} - \text{The sum of all ranks allocated} / \text{The number of goal statements}}{k} \right]^2$

k = the number of rankers

N = the number of goal statements.¹

$$W = \frac{3419.5}{\frac{1.7^2 \cdot (10^3 - 10)}{12}}$$

$$= \frac{3419.5}{4042.5}$$

$$= 0.85$$

¹An explanation of how to calculate W is given by Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, New York: McGraw-Hill, 1956.

APPENDIX Q

DETERMINATION OF W VALUE FOR
GOAL CATEGORIES

APPENDIX Q

DETERMINATION OF W VALUE FOR GOAL CATEGORIES

The rankings for the nine goals, according to the means assigned by the Project staff, principals and teachers are given below.

Goal	Project staff	Principals	Teachers
1	9	7	3
2	7	3	7
3	4.5	5	5
4	1	1	1
5	4.5	2	6
6	8	9	8
7	6	8	9
8	2	4	2
9	3	6	4

$$\begin{aligned}
 W &= \frac{s}{\frac{1 \cdot k^2 \cdot (N^3 - N)}{12}}^1 \\
 &= \frac{387.5}{\frac{1 \cdot 3^2 \cdot (9^3 - 9)}{12}} \\
 &= 0.72
 \end{aligned}$$

¹An explanation of the formula is given in Appendix P.

APPENDIX R

RESPONSES OF PRINCIPALS AND TEACHERS TO THE OPEN-ENDED
QUESTIONS IN THE PRINCIPAL AND TEACHER QUESTIONNAIRES

APPENDIX R

RESPONSES OF PRINCIPALS AND TEACHERS TO THE OPEN-ENDED QUESTIONS IN THE
PRINCIPAL AND TEACHER QUESTIONNAIRES

The four open-ended questions in the Principal Questionnaire and the responses given by principals and teachers are given below.

Question 1

"In your opinion, what are the best features of the Project?"

Principals. Responses of principals were:

1. Diagnostic services not previously available (22 responses).
2. Materials made available and introduced (14 responses).
3. The well trained personnel (12 responses)
4. The help given to individual children (11 responses).
5. Testing (5 responses)
6. Inservice work with teachers (5 responses)
7. A beginning of a needed service (5 responses).
8. IPI (3 responses).
9. The programs designed for pupils (2 responses).
10. The enthusiasm generated (2 responses).
11. Expert follow up advice (2 responses)
12. Students being given a chance to achieve success.
13. Realization by the teacher that you must start at the present level of the child if you are to help him.
14. Proved that disabled learners can be helped.
15. Help for the poorest students.

16. One specialist per pupil assistance.
17. The psychological assessments.
18. Diagnostic testing by the Psychologist.
19. The assistance given to the resource teacher.
20. Workbooks provided.
21. The classroom teacher has support for his program.

Teachers. Responses of teachers were:

1. Testing (20 responses)
2. The help given to individual children (17 responses).
3. Materials made available and introduced (16 responses)
4. The help given to teachers. (14 responses)
5. Diagnostic services not previously available (9 responses)
6. A beginning of a needed service (5 responses)
7. Motivation for teachers of learning disabled children (4 responses)
8. Well trained personnel (2 responses)
9. Testing by the Psychologist and his recommendations.
10. Help in diagnosing speech problems.
11. Follow-up.
12. Conferences held with the Project staff.
13. Reading was well organized.
14. Its lack of generalities and its aim at exactness.
15. The warmth and friendliness of the team members.
16. Testing helpful where school staff can follow up.

Comments made by teachers in response to this question included:

1. It is a much needed step forward.
2. A long overdue step in the right direction.
3. The best part of the Project is the teaching the teacher to

teach.

4. My diagnostic and instructional materials have been updated.
5. The program put new life into the teaching.
6. Teachers realize more their part in remedial work.
7. Teachers can become acquainted with materials and techniques.

Question 2.

"On which aspects of the Project would you like to see Project staff members concentrate their attention?"

Principals. Responses of principals were:

1. Helping individual children (15 responses).
2. Follow-up (12 responses)
3. Helping teachers to develop programs (11 responses).
4. Reading programs (9 responses).
5. Inservice training for teachers (8 responses).
6. More material for teachers (7 responses).
7. Math (4 responses).
8. Speech therapy (4 responses).
9. Diagnosis (4 responses).
10. Demonstrate how to deal with children having difficulties (4 responses).
11. Problem children (2 responses).
12. Evaluating progress of pupils for whom material provided.
13. Behavior.
14. Supplying exercises which will allow teachers to remove disabilities.
15. Involve parents.

Teachers. Responses of teachers were:

1. Helping individual children (14 responses).
2. Reading programs (14 responses).
3. Helping teachers to develop programs (10 responses).
4. More material for teachers (10 responses).
5. Inservice training for teachers (7 responses).
6. Follow up (6 responses).
7. Diagnosis, diagnostic materials (4 responses).
8. Language arts (3 responses).
9. Early primary grades.

Question 3

"Given the present allocation of resources, in what ways do you think that the operation of the Project could be improved?"

Principals. The responses of principals were:

1. Provide more time to schools (26 responses)
2. Give more help to individual children (10 responses)
3. Provide more consultants (6 responses) .
4. Spend less time travelling (5 responses).
5. Supply more materials (4 responses).
6. Cover a smaller area (2 responses).
7. Train teachers to do preliminary testing (2 responses).
8. Place a LAFS member in the school (2 responses).
9. Provide a central staff of highly trained personnel in each jurisdiction.
10. Have a team blitz after early testing.
11. Have one aide at a time.
12. Isolate one or two needs of the student at a time.
13. Provide more programs for teachers with learning disabled children.

14. Have workshops for groups of teachers.

15. In each jurisdiction contact-people who have time for the job should be engaged to work on developing the programs and helping the children involved. Better still, there should be such a person in each school. The present team would have full time work co-ordinating the programs, diagnosing, etc.

Teachers. Responses of teachers were:

1. Provide more time to schools (26 responses).
2. Provide more consultants(9 responses).
3. Supply more materials (6 responses).
4. Provide more help for teachers (5 responses).
5. Spend less time travelling (4 responses).
6. Have more in-service training (3 responses).
7. Have teachers participate in diagnosing and testing (2 responses).
8. Give feedback to other teachers (2 responses).
9. Have more planning time between classroom teachers and LAFS personnel (2 responses).
10. Better training provision for teachers wishing to specialize in remedial teaching and remunerative acknowledgement of their additional skills.
11. Project staff could give some training to all staff members.
12. More personal assistance in math.
13. More taped stories and games.
14. After school workshop.
15. Providing worksheets.
16. Sharing of materials between schools and areas.
17. More assistants for the consultants.

18. Come half as often but stay twice as long.

19. Their working time should be arranged to include either part of "noon hour" or part of after school or there could be a half hour contact time with teachers for in-service and discussion.

20. Providing the type of material that the child could use with as little assistance as possible from the teacher.

Question 4.

Principals and teachers were requested to: "Please add any comments you would like to make about the Project."

Principals. The most common responses made by principals were discussed in Chapter 7. Other comments made by principals included:

1. The Project has shown the need for the county to have its own consultant. (3 responses).
2. Communicate general findings to all teachers.
3. Enthusiasm of the Project staff.
4. With the professional help teachers have been able to assist learning disabled children.
5. Pleased--our school really needs the service.

Teachers. The most common responses made by teachers were also discussed in Chapter 7. Other comments made by teachers included:

1. Provide a special teacher in the school (9 responses).
2. The LAFS Project is performing a very necessary service. Its maintenance could serve to eventually eradicate much of the frustration suffered by both teachers and students.
3. The idea behind LAFS is very good but there just aren't enough LAFS people.
4. Excellent project.

5. Don't stop now as this assistance is certainly better than we've ever had.
6. I was pleased with all the assistance I received.
7. I think it is a wonderful project and has assisted one of the pupils tremendously.
8. A LAFS team should be operating in each county.
9. Staff is friendly and very helpful.
10. I like this Project...I have gained valuable information on how to help students.
11. I would like to see it continue.
12. I think that they are doing an excellent job considering the limitations.
13. A tremendous program!
14. I found this program beneficial and the results gratifying.
15. The ideas of the project are fine, the materials given are quite suitable on reading.
16. Referrals have been and are good after tests show other outside tests are necessary.
17. I feel the program is a "Godsend" to all the teachers and the students.

APPENDIX S

THE PILOT STUDY ASSOCIATED WITH THE CONSTRUCTION
OF THE ATTITUDE MEASURING INSTRUMENT

APPENDIX S

THE PILOT STUDY ASSOCIATED WITH THE CONSTRUCTION
OF THE ATTITUDE MEASURING INSTRUMENT

White and Hall (1970:340) reported that:

The twelve adjectives (which) have been developed over time and in many studies providing the best means for obtaining simple structure from measures of person concepts (are): large-small; unpleasant-pleasant; fast-slow; dull-sharp; thin-thick; happy-sad; weak-strong; good-bad; moving-still; unfair-fair; not active-active; heavy-light.

To these adjective pairs were added three more "clear-hazy"; "rough-smooth" and "vague-precise" which Osgood et al. (1957) had claimed were indicators of attitude. The fifteen adjective pairs were included in an instrument and used to describe four concepts. The concepts were: socially maladjusted student; program which provides materials and suggestions for teachers of learning disabled students; centrally located Teacher-Advisor who travels from school to school; and learning disabled student.

The instrument was administered to a group of twenty students enrolled in an Education course at The University of Alberta in October, 1973.

The aim of the study was to see whether the pilot group would see the adjective pairs as describing the same factors which had been reported by White and Hall and whether the three adjective pairs which were included were indicators of attitude.

The ratings assigned to each adjective pair for each concept were factor analysed. The factors which the pilot study found to be indicated

by each adjective pair are included with the results given by White and Hall (1970:349).

The presentation below is adapted from that given by White and Hall (1970:349, Table 1)

	I	FACTORS II	III
	EVALUATION	POTENCY	ACTIVITY
Large - Small			W S
Unpleasant - Pleasant	W	S	
Fast - Slow	S		W
Dull - Sharp	W S		
Thin - Thick	W		S
Happy - Sad	S	W	
Weak - Strong	W S		
Good - Bad		W S	
Moving - Still	S	W	
Unfair - Fair	W	S	
Not active - Active	W S		
Heavy - Light		W	S
Clear - Hazy	S		
Rough - Smooth	S		
Vague - Precise	S		

1. W signifies reported by White and Hall.
2. S signifies that the study found that the factor was indicated by the adjective pair.

The results obtained by the study were not exactly the same as those obtained by White and Hall but the sample was not very large. The three adjective pairs which were added to the list supplied by White and Hall were found to be indicators of attitude as Osgood had claimed.

The pilot study had shown six of the adjective pairs to be indicators of attitude. The other three adjective pairs on which the pilot study did not agree with the findings of White and Hall were included in the final instrument as there was reported evidence that they were indicators of attitude.

From the list of adjective pairs from which the three which had been included in the pilot instrument were taken, a fourth adjective pair "ordered - chaotic" was selected and included in the final instrument.

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